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Environmental Assessment
For The
Epsie NHS Corridor
Powder River County, Montana

Epsie-East & West; STPP 37-3(6) 85; Control No.2149
Epsie-East; NH 37-3(10) 96; Control No. 4056
Broadus-East; F 23-2(11) 78; Control No. 1517

Prepared For:
U.S. Department of Transportation
Federal Highway Administration and the
Montana Department of Transportation

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ENVIRONMENTAL ASSESSMENT
for the

EPSIE NHS CORRIDOR

Epsie-East & West; STPP 37-3(6) 85; Control No. 2149
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Powder River County, Montana

This document is prepared in conformance with the *Montana Environmental Policy Act* (*MEPA)* requirements and contains the information required for an Environmental Assessment under the provisions of ARM 18.2.237(2) and 18.2.239. It is also prepared in conformance with the *National Environmental Policy Act* (*NEPA)* requirements for an Environmental Assessment under 23 CFR 771.119.

Submitted pursuant to:

42 U.S.C. 4332(2)(c), 49 U.S.C. 303 and

Sections 2-3-104, 75-1-201, M.C.A.

by the

U.S. DEPARTMENT OF TRANSPORTATION
Federal Highway Administration

and the

MONTANA DEPARTMENT OF TRANSPORTATION

Submitted by: ______________________ Date: 10/9/01
MONTANA DEPARTMENT OF TRANSPORTATION
Environmental Services

Reviewed & Approved for
Distribution:

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Federal Highway Administration

Table of Contents

Page No.

Cover Page
Table of Contents i

I. DESCRIPTION OF THE PROPOSED ACTION

A. Project Location, Length and Termini 1
B. Scope and Nature of the Proposed Work 2
C. Project Funding 5
D. Jurisdiction 6

II. PURPOSE OF AND NEED FOR THE PROJECTS

A. Purpose 11
B. Transportation and Other Needs 11
  1. Project Histories and Status 11
  2. Functional Classification 12
  3. Current and Projected Road Use 12
  4. Roadway Deficiencies 13
C. Traffic Safety 17
  1. Accident History of the Epsie NHS Corridor 17
  2. Truck Accidents 18
D. Overall Conclusions on Need 19

III. ALTERNATIVES CONSIDERED

A. Introduction 20
B. No Action Alternative 20
C. Preferred Alternative and Associated Improvements 20
  1. Overview 20
  2. Design Speed/Posted Speed Limits 21
  3. Typical Road Cross-Sections 21
  4. Realignments 24
  5. Stream Crossings/Bridges and Culverts 24
  6. Intersections and Approaches 25
  7. Stockpasses 25
  8. Curb and Gutter, Sidewalks, and Bike Paths 27
D. Build Alternatives Considered But Rejected 27
  1. Reconstruct With an 8.5 m (28.0 feet) Finished Top 27
  2. Reconstruction Following the Existing Centerline 28
  3. Follow an Offset Alignment West of the Little Powder River 28
  4. Other Alternate Alignments for the NHS Corridor 37

IV. AFFECTED ENVIRONMENT

A. Introduction 38
B. Natural Environment 38
  1. Landform and Physiography 38
  2. Geology and Soils 38
  3. Climate 39
  4. Water Resources and Quality 40
  5. Air Quality 43

Page No.

- 6. Vegetation 43
- 7. Wetlands 44
- 8. Fish and Wildlife Resources 45

C. Human Environment 49
- 1. Land Ownership and Use 49
- 2. Social and Economic Conditions 50
- 3. Rights-of-Way and Utilities 51
- 4. Noise 52
- 5. Hazardous Materials/Substances 52
- 6. Recreational Opportunities and Resources 54
- 7. Pedestrian and Bicycle Facilities 55
- 8. Visual Resources 55
- 9. Archaeological and Historical Resources 55
- 10. *Section 4(f)* Properties 57
- 11. *Section 6(f)* Lands 58

V. ENVIRONMENTAL IMPACTS AND MITIGATING MEASURES

A. Impacts to the Natural Environment 59
- 1. Topography, Geology, and Soils 59
- 2. Impacts to Important Farmland 61
- 3. Water Quantity and Quality Impacts 62
- 4. Floodplain Impacts 66
- 5. Air Quality Impacts 67
- 6. Noise Impacts 68
- 7 Impacts to Vegetation 68
- 8. Wetlands Impacts 70
- 9. Impacts to Wildlife and Fisheries Resources 72
- 10. Impacts to Threatened and Endangered Species 74

B. Impacts to the Human Environment 78
- 1. Land Use Impacts 78
- 2. Right-of-Way and Utility Impacts 79
- 3. Transportation/Circulation Impacts 81
- 4. Social Impacts/Environmental Justice 83
- 5. Economic Impacts 83
- 6. Hazardous Materials/Substances Impacts 84
- 7. Impacts to Cultural, Archaeological/Historical Resources 85
- 8. *Section 4(f)* Impacts 87
- 9. *Section 6(f)* Impacts 88
- 10. Visual Impacts 88
- 11. Considerations Relating to Pedestrians and Bicyclists 89
- 12. Other Secondary and Cumulative Impacts 90
- 13. Construction Impacts 94
- 14. Permits Required 95

VI. COORDINATION WITH OTHERS

A. Agency Coordination 97
- 1. Cooperating Agencies 97
- 2. Agencies Consulted 97

B. Public Involvement 98
- 1. Project News Releases 98

Page No.
- 2. Public Meetings Held on the Proposed Projects ... 98
- 3. Planned Public Involvement Activities ... 98

C. Distribution List for Document ... 99
D. List of Agencies With Jurisdiction and/or Permits Required ... 100
E. List of Other Agencies, Persons, or Groups Contacted or Have Contributed Information ... 101

APPENDICES

Appendix A: List of Preparers
Appendix B: Correspondence Pertinent to Project
Appendix C: Public Involvement
Appendix D: Nationwide Programmatic *Section 4(f)* Evaluation and Related Materials

List of Tables

Page No.

Table 1: Current and Future Traffic in the Epsie NHS Corridor ... 13
Table 2: Epsie NHS Corridor Accident Summary (1990-1999) ... 17
Table 3: Comparison of Environmental Effects/Costs Little Powder River Realignment Versus Rebuilding On or Near the Existing Alignment ... 31
Table 4: Species, Habitat, and Potential Occurrence of T/E Species in the Epsie NHS Corridor ... 48
Table 5: Underground Storage Tank (UST) Facilities in the Epsie NHS Corridor ... 53
Table 6: Leaking Underground Storage Tank (LUST) Facilities in Epsie NHS Corridor ... 54
Table 7: Archaeological and Historic Sites in the Epsie - East & West and Epsie-East Project Areas ... 56
Table 8: Archaeological and Historic Sites in the Broadus-East Project Area ... 57
Table 9: Total Estimated Farmland* Impacts in Epsie NHS Corridor ... 61
Table 10: Wetland Locations and Estimated Impacts in the Epsie NHS Corridor ... 71
Table 11: Summary of Potential Impacts to Endangered, Threatened, Proposed, and Candidate Species in the Epsie NHS Corridor ... 77
Table 12: Anticipated Right-of-Way (R/W) Impacts by Project in the Epsie NHS Corridor ... 79

List of Figures and Photo Plates

Page No.

Figure 1: General Area Location Map ... 3
Figure 2: Project Locations ... 4
Figure 3: Federal and State Lands in the Epsie NHS Corridor ... 7
Figure 4: Typical Road Cross-Sections Epsie-East & West and Epsie-East Projects ... 22
Figure 5: Typical Road Cross-Sections Broadus-East Project ... 23
Figure 6: Little Powder River Realignment ... 26
Figure 7: Major Drainages in Epsie NHS Corridor ... 42
Figure 8: Wetland Sites Epsie NHS Corridor ... 47
Figure 9: Pumpkin Creek Channel Change ... 65

Photo Plate 1: Project Area Landscape Photographs ... 8
Photo Plate 2: Project Area Landscape Photographs ... 9
Photo Plate 3: Project Area Landscape Photographs ... 10

I. Description of the Proposed Action

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I. DESCRIPTION OF THE PROPOSED ACTION

A. Project Location, Length and Termini

The MONTANA DEPARTMENT OF TRANSPORTATION (MDT) plans to improve transportation on U.S. Highway 212 and Montana Highway 59 in Powder River County by implementing three projects. The projects would reconstruct the existing roadway and make changes to its alignment to provide an improved driving surface and safer road for highway users. The proposed work would be done under projects designated by MDT as:

"Epsie-East & West"; STPP 37-3(6) 85; Control No. 2149
"Epsie-East"; NH 37-3(10) 96; Control No. 4056
"Broadus-East"; F 23-2(11) 78; Control No.1517

U.S. Highway 212 and Montana Highway 59 are included on the National Highway System (NHS) in Montana. The NHS consists of over 6,196 km (3,850 miles) of the state's most important transportation routes including the Interstate highway system, other principal arterials, and other highways that are essential to the nation's strategic defense policy or that link military installations.

The three proposed projects are being developed and evaluated as a NHS corridor. MDT and the Federal Highway Administration (FHWA) determined the projects should be evaluated as a corridor because they adjoin one another, their "Ready" dates are less than a year apart, and a uniform road design is planned for construction on the routes. References made in this environmental document to the "proposed projects," "proposed improvements," "proposed action" should be assumed to include all three reconstruction projects. Where needed to identify unique features or to clarify the discussion in the document, projects will be specifically referenced. " The "project area" or "Epsie NHS Corridor" refers to the roadway and lands adjacent to all three highway projects.

Regional Location. The project area occurs in southeastern Montana near the center of Powder River County. The Town of Broadus is the County Seat of Powder River County. Broadus is located about 119 kilometers (km) or 74 miles south of Miles City and about 53 km (33 miles) north of the Wyoming state line. Ashland, the only other community of size in the project area, is located 71 km (44 miles) west of Broadus on U.S. Highway 212. Epsie, which now consists only of an abandoned post office, is located about 19 km (12 miles) northwest of Broadus on U.S. Highway 212. The general location of the project area in Montana and in Powder River County is shown in **FIGURE 1**.

The Custer National Forest is located just west of the project area in Powder River and Rosebud Counties. Lands comprising the Northern Cheyenne Indian Reservation lie immediately west of Ashland in Rosebud County.

Project Locations. The proposed projects occur on adjoining sections of U.S. Highway 212 and Montana Highway 59 in the Broadus area. Together, the Epsie-East & West, Epsie-East, and Broadus-East projects comprise a highway corridor 55.5 km (34.5 miles) long. The project corridor begins about 34.9 km (21.7 miles) northwest of Broadus on U.S. Highway 212 and extends southeasterly through Broadus on U.S. Highway 212 and Montana Highway 59. The corridor ends about 20.6 km (12.8 miles) southeast of Broadus on U.S. Highway 212. A more specific description of each project's location follows.

☐ **Epsie-East & West; STPP 37-3(6) 85.** This proposed road reconstruction project on U.S. Highway 212 begins 34.9± km (21.7± miles) northwest of Broadus at Reference Post (RP) 84.8 and extends 17.7± km (11.0± miles) southeasterly to end at RP 95.8. The beginning of the project would be at the end of MDT's recently completed Camps Pass-East project.

☐ **Epsie-East; NH 37-3(10) 96.** This proposed road reconstruction project begins approximately 17.2± km (10.7± miles) northwest of Broadus at RP 95.8 and continues easterly for 12.4± km (7.7± miles) to end at RP 103.6. The project would end west of the intersection of U.S. Highway 212 and Montana Highway 59.

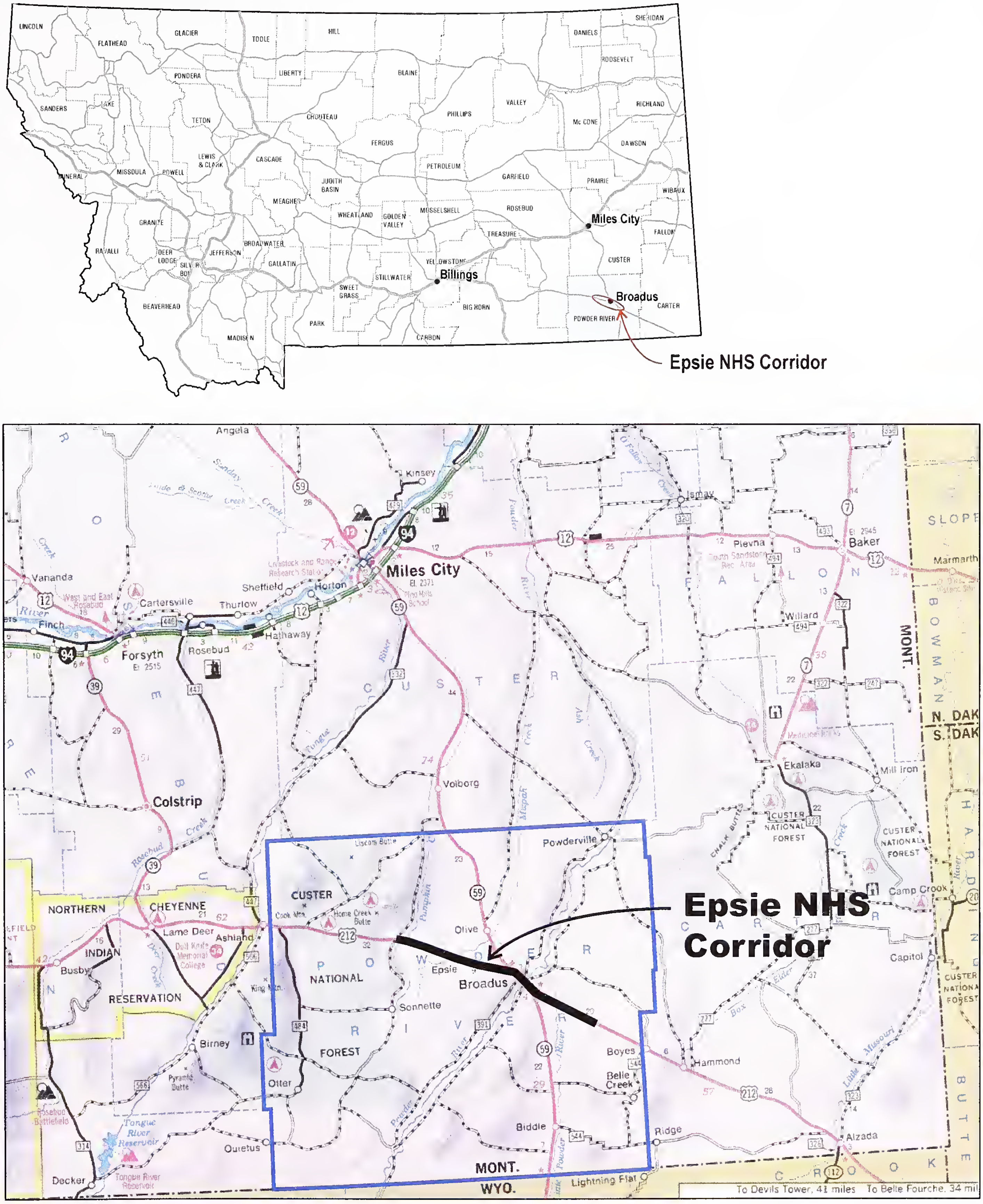
☐ **Broadus-East; F 23-2(11) 78.** The Broadus - East project begins near the intersection of U.S. Highway 212 and Montana Highway 59 northwest of Broadus and extends southeasterly for 25.4± km (15.8± miles) to end at RP 92.3 on U.S. Highway 212. The proposed project passes through the Town of Broadus and includes an intersection with Secondary Highway 391 and major stream crossings at Cottonwood Creek, the Powder River, and at the Little Powder River. Highway 59 diverges from the route about 6.1 km (3.8± miles) east of Broadus.

FIGURE 2 shows the approximate locations of the Epsie-East & West, Epsie-East, and Broadus-East projects. Typical landscapes in the Epsie NHS Corridor are shown in **PHOTO PLATES 1, 2** and **3**.

B. Scope and Nature of the Proposed Work

The proposed projects would reconstruct the existing 7.2 meter (m) (24-foot) wide paved roadway to provide a consistent horizontal and vertical alignment to blend with the topography, enhance safety, and provide more uniform driving conditions for motorists. The proposed reconstruction would be done to comply with MDT's design standards for Rural Principal Arterials. The proposed roadway would have a finished top width of 10.8 m (35.4± feet) and accommodate two 3.6 m (11.8±foot) wide driving lanes and two 1.8 m (5.9± foot) wide shoulders. Roadside slopes would be flattened to improve safety.

The proposed improvements through the Town of Broadus include "urban" roadway features such as curbs and gutters, sidewalk, and a storm drain system. The proposed road would be widened to 12.5 m (41.0± feet) through the Town of Broadus where curb and gutter would be installed. The roadway would be striped to delineate two 3.6 m (11.8±foot) wide driving lanes and two 2.4 m (7.9± foot) wide shoulders between the curb faces.



Not To Scale

Figure 1
General Area Location Map

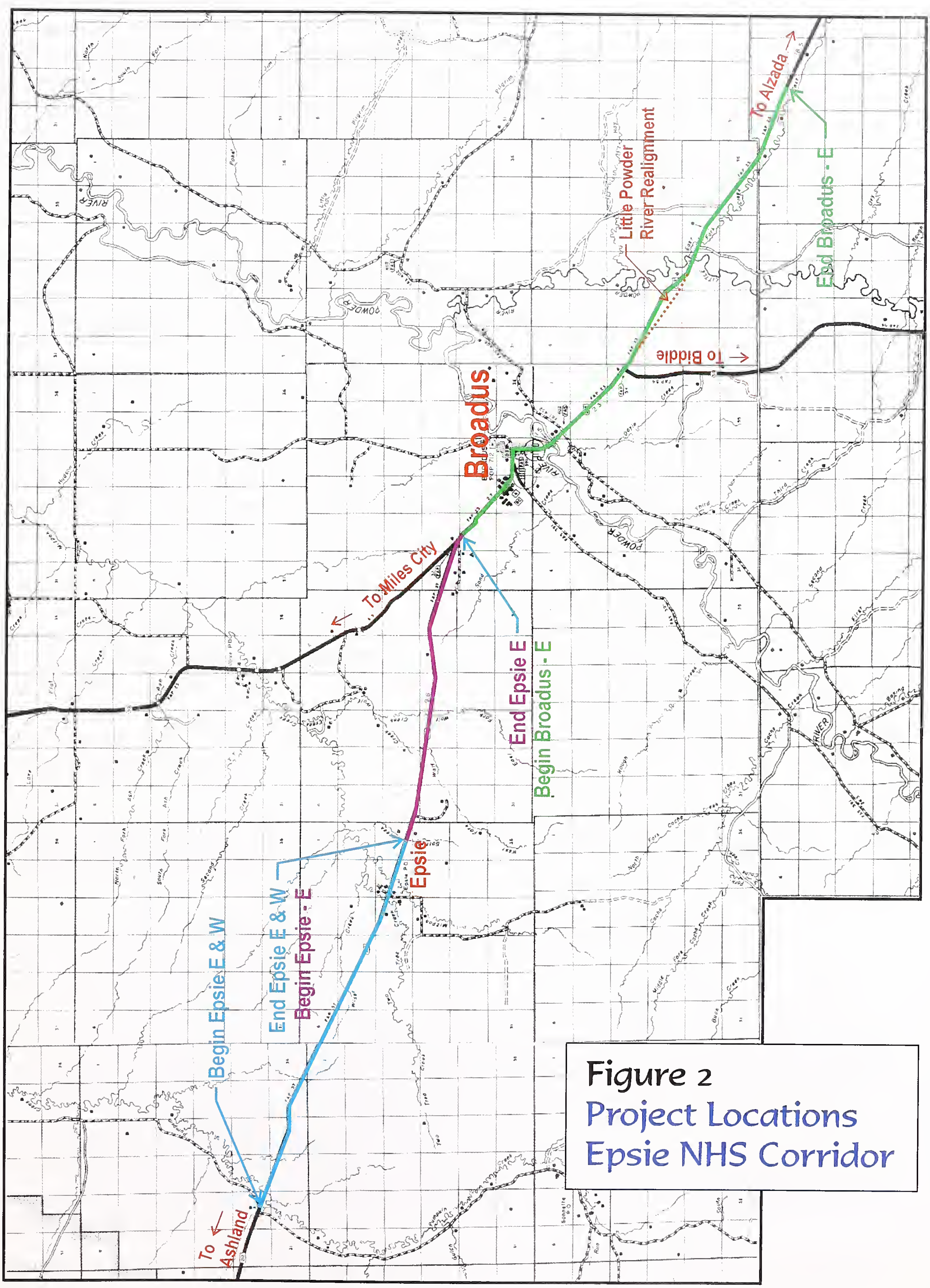


Figure 2
Project Locations
Epsie NHS Corridor

The proposed improvements would be made generally on or near the existing alignments of U.S. Highway 212 and Montana Highway 59. Over majority of the area where improvements are proposed, the centerline of the reconstructed road would be shifted about 3.6 m (12.0 feet) to the north shoulder of the existing highway to minimize impacts on utilities or sensitive environmental areas. New right-of-way would be required through the rural areas crossed by the proposed projects. Reconstruction through the Town of Broadus would be accomplished within the existing right-of-way.

The Broadus - East project involves more notable horizontal alignment changes including a 3.4 km (2.1± mile) long realignment of U.S. Highway 212 west of the Little Powder River. The Broadus-East project also has several areas where the horizontal alignment would be shifted approximately 20 m (65.6± feet) north or south of the existing highway's centerline. The proposed improvements would modify the vertical alignment in locations where vertical curves limit sight distance or where undesirable grades exist.

The proposed projects are considered to be in rolling terrain and their horizontal and vertical alignments would be designed to meet the requirements for a design speed of 100 km/hr (about 62± mph). This design speed is consistent with standards for principal arterial routes in rolling terrain as outlined in MDT's "Geometric Design Standards."

MDT intends to evaluate existing drainage culverts in the Epsie East & West and Epsie-East project areas for continued use. If existing culverts were found to have sufficient remaining service lives, the pipes would be used in place and extended to accommodate road widening and/or minor alignment shifts. All culverts would be replaced within the limits of the Broadus-East project. The only bridges associated with the proposed projects are located within the Broadus-East project area. The existing bridges over the Powder River and Little Powder River would be used in place. The bridge over Cottonwood Creek in Broadus would be replaced with a large concrete box culvert.

Other improvements would include grading, placing road base material and new pavement, upgrading signing and markings on the roadway, installing guardrail where warranted, and revegetating disturbed areas.

More details about the proposed improvements and alternatives are provided in Part III.

C. Project Funding

The proposed improvements would be financed under Montana's NHS Program with funds from the Federal Highway Trust Fund. These funds are available through the *TRANSPORTATION EQUITY ACT FOR THE 21ST CENTURY* (TEA-21) and are administered by the FHWA. NHS funding to Montana includes a minimum annual apportionment plus additional funding based on a formula that considers total principal arterial lane miles; vehicle miles traveled on principal arterial routes; diesel fuel used; and a factor that considers how many people there are to support maintenance of the state's Interstate and NHS highways. NHS funding is about 87% federal with a 13% state match.

D. Jurisdiction

U.S. Highway 212 and Montana Highway 59 are under the jurisdiction of MDT. The agency has full maintenance responsibilities for both routes including the portion of U.S. Highway 212 within the Town of Broadus. Major roads intersecting the Epsie NHS Corridor are under the jurisdiction of and maintained by Powder River County. The Town of Broadus has jurisdiction and maintenance responsibilities for local streets that intersect U.S. Highway 212 within Broadus.

The Epsie NHS Corridor also crosses federal lands administered by the U.S. Department of the Interior Bureau of Land Management (BLM) and state lands administered by the Montana Department of Natural Resources and Conservation (DNRC). The Epsie NHS corridor on U.S. Highway 212 crosses federal and state lands in the following legally described areas:

Township 3 South; Range 48 East; All of Section 34, M.P.M. -- (BLM)
Township-4-South; Range-49-East; Portion of Section 6, M.P.M. -- (BLM)
Township 3 South; Range 48 East; All of Section 36, M.P.M. -- (DNRC)
Township 5 South; Range 52 East; All of Section 36, M.P.M. -- (DNRC)

FIGURE 3 shows the locations of these and other federal and state lands in the vicinity of the Epsie NHS Corridor.

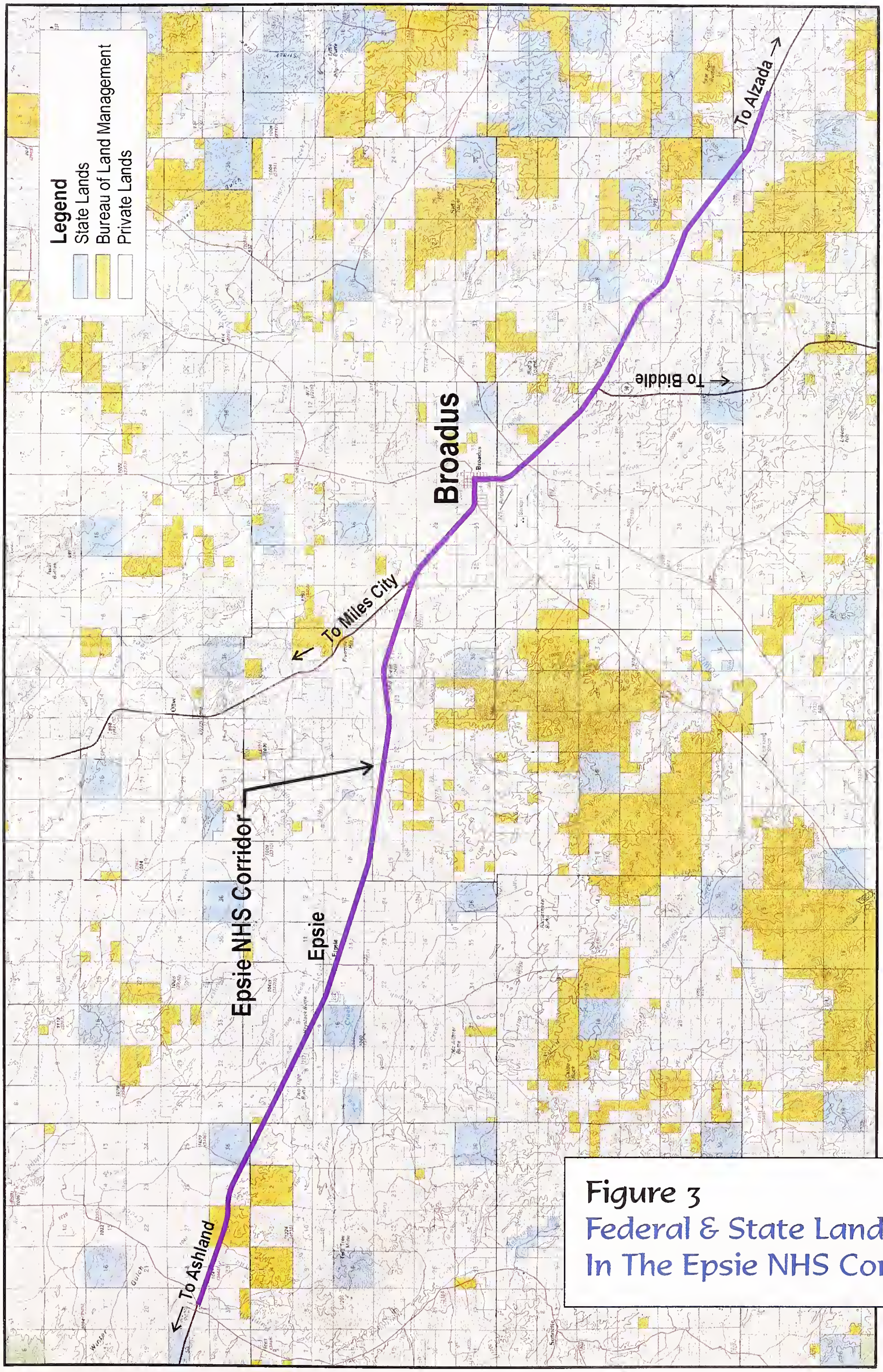


Figure 3
Federal & State Lands
In The Epsie NHS Corridor

Looking west from near the beginning of the Epsie - East & West project.

Looking east across rolling terrain within the Epsie - East project area.

Photo Plate 1

Project Area Landscape Photos

Looking northwesterly from near the intersection of U.S. Highway 212 and Montana Highway 59 north of Broadus.

U.S. Highway 212 near the existing bridge over the Little Powder River.

Photo Plate 2

Project Area Landscape Photos

Looking west from the intersection of Park Avenue and Holt Street in Broadus.

Typical development along the roadway in the southeastern portion of the Town of Broadus.

Photo Plate 3
Project Area Landscape Photos

II. Purpose and Need for Action

II. PURPOSE of and NEED for the PROJECTS

This section of the EA discusses the purpose of the proposed highway improvement projects and elaborates on the transportation and other needs of the Epsie NHS Corridor. The intent of this Part is to establish why the FHWA and MDT are proposing to spend large amounts of taxpayers' money while at the same time causing environmental impacts in the vicinity of these projects. The alternatives in Part III were developed in response to these transportation needs.

A. Purpose

The fundamental purpose of the proposed improvements is to upgrade portions of U.S. Highway 212 and Montana Highway 59 to provide for the safe and efficient movement of traffic. To accomplish this purpose, the proposed action must:

- incorporate physical changes to the roadway and its adjoining environment to increase the safety, comfort, and convenience of the traveling public;
- bring the road's design into compliance with MDT's design standards for Rural Principal Arterials;
- reduce maintenance requirements and costs associated with the roadway, bridges and other drainage facilities on the routes; and
- enhance transportation on routes important to Montana's and the nation's economy.

B. Transportation and Other Needs

This section identifies the problems or concerns that already exist with the current transportation facility or that will exist if the proposed improvements are not implemented. These transportation "needs" focus primarily on traffic safety concerns and deficient conditions associated with the roadway and its features. The section begins with a brief history of the proposed projects and a discussion of the roadway's use.

1. Project Histories and Status

Epsie-East & West. The existing roadway in the Epsie-East & West project area was built in 1958 under Project F 334 15. The project was sealed and covered in 1960 and a slurry seal was applied in 1963. The entire project received a plant mix overlay in 1969. Authorization to begin preliminary engineering work for this project was received from the FHWA in 1992. MDT's current "Ready" date for the Epsie - East & West project is November 1, 2001.

Epsie-East. The roadway in the Epsie-East project area was originally built in 1960 under project F 334 16. Over the years, the highway has received various surface treatments including a plant mix overlay in 1969. Authorization from the FHWA to begin preliminary engineering work for this project was received in 1999. MDT's current "Ready" date for the Epsie - East & West project is December 1, 2001.

Broadus-East. The Broadus-East segment of this NHS corridor encompasses portions of six different projects identified as DF 198 4, FAP 198-A, FAP 262-D(1), BRF 23-1(7)81, FAP 262 A, and F-262(8). Various segments of the existing roadway were built under these projects between 1928 and 1986. Major improvements were completed on portions of the route in 1940 and 1969. The FHWA authorized preliminary engineering work for this project in 1991. MDT's current "Ready" date for the Broadus-East project is September 1, 2001.

In 1999, MDT and the FHWA determined the Epsie NHS corridor projects should be evaluated in an Environmental Assessment.

2. Functional Classification

Montana's highway system (including major urban streets) is functionally classified by the character of service each facility provides. The functional classification system recognizes that each highway (or street) provides varying levels of access to property and travel mobility. The functional classification system also provides the framework for determining the geometric design of individual highways and streets. Once the function of the highway is defined, the appropriate design controls, roadside safety elements, amenities, and other design values can be determined.

The U.S. Highway 212 and Montana Highway 59 are classified as Rural Principal Arterials. Arterial highways are characterized by their capacity to quickly move relative large volumes of traffic. The arterial system provides for high travel speeds and for the longest trip movements. Rural principal arterials are highways that provide access between an arterial and a major port, airport, public transportation facility, or other intermodal transportation facility. As indicated previously, U.S. Highway 212 and Montana Highway 59 are on the NHS system.

3. Current and Projected Road Use

Current Road Use. U.S. Highway 212 and Highway 59 are important commercial transportation facilities because they link interstate and regional population/commerce centers. U.S. Highway 212 provides an east-west connection between Interstate 90 south of Hardin, Montana and Interstate 90 in the Spearfish and Rapid City areas of South Dakota. Because U.S. Highway 212 provides a shorter route between Billings and South Dakota, many commercial transporters prefer the route instead of using Interstate 90. Highway 59 is a north-south route that links Interstate 94 at Miles City, Montana with Interstate 90 near Gillette, Wyoming. Due the important transportation linkages provided by the routes, improving U.S. Highway 212 and Highway 59 through the Epsie NHS corridor is essential to meeting the demands of commercial traffic passing through the area.

U.S. Highway 212 and Highway 59 also provide access to recreational sites and public lands in the region. U.S. Highway 212 passes through the Custer National Forest east of Ashland where a variety of outdoor recreation sites and opportunities exist. U.S. Highway 212 can be used to access Devils Tower National Monument in northeastern Wyoming and the Black Hills area of South Dakota. The routes also provide general access to the Pumpkin Creek and Bell Creek gas and oil fields and large coal deposits in southeast Montana. The Powder River Basin of Montana and Wyoming (which includes portions of Powder River County) is presently an area of intense interest for energy development and production due to an abundance of large reserves of methane gas within the Basin's coal beds. The development of coal bed methane is viewed by the energy industry as a highly viable means of supplementing the nation's natural gas supply.

U.S. Highway 212 and Highway 59 accommodate notable volumes of local traffic generated by area residents traveling to and from Broadus and farms and ranches in the outlying area. U.S. Highway 212 also serves as a "main street" for local commerce in Broadus.

Current and Future Traffic Volumes. MDT's design traffic data for U.S Highway 212 and Highway 59 in the Epsie NHS corridor is summarized in **TABLE 1**.

Table 1: Current and Future Traffic in the Epsie NHS Corridor

Traffic Characteristics	Epsie-East & West	Epsie-East	Broadus-East Rural Section
1999 Average Daily Traffic (ADT) (Vehicles per day)	890	890	1230
2019 ADT (Vehicles per day)	1090	1090	1500
Design Hourly Volume (DHV) (Vehicles per hour)	160	160	210
Directional Distribution	55-45%	55-45%	55-45%
Percent Trucks	32.4%	32.4%	26.5%
18 kip Equivalent Single Axle Loads (EASLs)-- Daily	205.08 (8165 kg)	205.08 (8165 kg)	178.48

MDT's traffic data indicates that traffic volumes within the Epsie NHS Corridor are anticipated to grow by about 1.1% annually over the next 20 years. **TABLE 1** shows that trucks comprise a substantial share of all traffic in the corridor. The proposed projects could result in future increases in commercial traffic on U.S. Highway 212 as improved driving conditions and better road surfaces are realized within this arterial corridor. The improved highway corridor would accommodate anticipated traffic growth without a substantial decrease in the level of service provided by the facility.

4. Roadway Deficiencies

The consistency and predictability of driving characteristics are important features of a safe and convenient road. Differences in the physical conditions of the road or inconsistencies in the way the road is designed reduce the predictability of driving conditions for road users. The lack of predictability in roadway conditions or design can have a direct bearing on the overall safety of the roadway.

Sharp curves around terrain features or over the crests of hills do not provide sufficient distance for a motorist to see obstructions in the roadway and to stop if necessary. Such curves are said to lack adequate stopping sight distance. The AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO) defines stopping sight distance as the length of roadway ahead visible to the driver. The minimum sight distance on a roadway should be long enough to allow a vehicle traveling at or near the design speed to stop before reaching an object in its path. Although greater sight distance length is obviously desirable, the minimum stopping sight distance should be provided at every point on the roadway.

The amount of stopping sight distance required depends mostly on the design speed (the driving speed for which the road was or is being designed). AASHTO defines design speed as the maximum safe speed maintainable over a specified section of highway when conditions permit design features to govern. The design speed is established based on the topography, adjacent land use, and the functional classification of the highway. All of the pertinent features of the highway must be related to the design speed to obtain a balanced and sound design for the facility. The appropriate design speeds for various functional classifications of roads in Montana have been established and are published in MDT's "Geometric Design Standards."

Requirements for stopping sight distance length, as well as other geometric features such as horizontal and vertical curvature and superelevation (the degree of banking on curves), are directly related to and vary substantially with design speed. Other features, like pavement and shoulder widths and clearances to roadside obstructions, are not directly related to design speed but they affect travel speeds. Highway designers strive to use the highest design speed as practicable for safety, mobility, and efficiency reasons.

PRINCIPAL DESIGN CONTROLS

U.S. Highway 212 and Montana Highway 59 pass through rolling terrain. MDT's "Geometric Design Standards" state that the appropriate design speeds for Rural Principal Arterials in rolling terrain is 100 km/h (62±mph). Controlling geometric standards for a 100 km/h (62± mph) design are as follows (from *Figure 12-2: Geometric Design Criteria for Rural Principal Arterials* in MDT's "Road Design Manual"):

- Minimum Radii = 395 m (1,296± feet)
- Maximum Gradients = 4% (rolling terrain)
- Passing Sight Distance = 675 m (2,215± feet)
- Desirable Stopping Sight Distance = 210 m (689± feet)
- Minimum Stopping Sight Distance = 160 m (525± feet)

ROADWAY DEFICIENCIES AND ALIGNMENT IRREGULARITIES

Horizontal Alignment. The controlling geometric design criteria listed above were used to evaluate the existing road's horizontal alignment. Preliminary engineering analyses determined that the existing horizontal alignments of U.S. Highway 212 and Highway 59 generally meet the criteria for the appropriate design speed. However, two curves within the Broadus-East project area have radii of 349 m (1,145± feet) and do not meet the minimum radii of 395 m (1,296± feet) for the desired design. Additionally, a 90-degree corner exists at Holt Street and Park Avenue in Broadus that is controlled by stop signs and a flashing beacon.

Vertical Alignment. The existing vertical alignment of U.S. Highway 212 and Highway 59 includes a wide variety of vertical curves and grades as steep as 6.00%. MDT reviewed the vertical alignment of the Epsie NHS corridor and concluded the following:

- The existing vertical alignment of U.S. Highway 212 in the Epsie-East & West project area provides the absolute minimum stopping sight distance for a 96.6 km/h (60± mph) design. Grades exceeding 4.00% occur at four locations with a maximum grade in the project area of 5.095%.

- Three sag curves and two crest curves within the Epsie-East project area do not provide desirable stopping sight distance but do meet minimum stopping sight distance for the appropriate design speed. One crest curve provides only the minimum stopping sight distance for 90 km/h (56± mph). Grades exceeding 4.00% occur at three locations in the Epsie - East project area with a maximum grade of 5.97%.

- The existing vertical alignment of the Broadus-East project has thirteen crest and thirteen sag curves that are substandard for the appropriate design speed. These curves only provide the absolute minimum stopping sight distances for speeds ranging from 48.3 km/h (30± mph) to 96.6 km/h (60± mph). Grades in excess of 4.00% occur at fifteen locations with the maximum grade being 6.00% within the corridor.

These irregularities do not allow enough visibility over the crests of hills for drivers to stop and avoid potential conflicts with obstructions or other users of the road like vehicles, agricultural machinery, bicycles and pedestrians, and wildlife.

Road Width. U.S. Highway 212 and Highway 59 have finished top surfaces that generally range from 7.2 m (23.6± feet) to 8.4 m (27.6± feet) in width in rural portions of the Epsie NHS corridor. The existing roadway has been widened through the Town of Broadus and top surface widths typically range from 9.1 m (29.8± feet) to 12.2 m (40.0± feet). The road has also been widened to about 18.3 m (60.0± feet) for approximately one block to the west and south of the Holt Street and Park Avenue intersection in Broadus.

According to MDT's "Geometric Design Standards," the minimum paved roadway width for Rural Principal Arterials with ADT volumes similar to those within the Epsie NHS corridor is 10.8 m (35.4± feet). MDT proposes to construct a 10.8 m (35.4± feet) wide road through the Epsie-East & West and Epsie-East project areas. An 11.6 m (38.1± feet) finished top width is planned for the rural portion of Broadus-East project and a 12.0 m (39.4± feet) finished top surface is proposed for the urban portion of project.

Road Condition. Most of the existing highway within the Epsie NHS corridor has not received any major work except for maintenance activities since 1969. Portions of the existing road have been patched extensively and the pavement has deteriorated to a point where maintenance costs have become excessive. If deterioration were allowed to continue, the pavement condition would eventually present a hazard to road users. Pavement deterioration and the need to provide a better driving surface were two of the reasons MDT initiated planning improvements for the corridor.

In the past, local residents have expressed concern that the poor condition of U.S. Highway 212 and Highway 59 has discouraged traffic from using the routes in favor of better-maintained interstate routes. This situation has adverse economic implications for businesses in Broadus.

Within the Broadus-East project area, the approaches to the Powder River Bridge have settled and require frequent maintenance.

Intersections. Various side roads and approaches often join U.S. Highway 212 and Highway 59 at skewed intersections limiting sight distance for motorists attempting to enter onto the highway. Such intersections must be reconfigured to provide adequate sight distance.

Roadside Slopes and Clear Zone. The existing cut and fill slopes and associated clear zones along many areas of the Epsie NHS Corridor are substandard for the proposed design speed. The clear zone is described as the distance beyond the edge of the travel lane that should be clear of any non-traversable hazards or fixed-objects. Roadsides with slopes of 3:1 or greater are considered traversable. A 3:1 slope means that the roadside decreases in height by one vertical unit of measure for every three horizontal units of measure away from the roads edge. Roadsides would typically be designed with 4:1, 5:1, or 6:1 slopes. Associated clear zones would range from 11.6 m to 16.1 m (38.0 feet to 90.1 feet) depending on the slope's design. Snow slopes, graded at 11:1 from the edge of the pavement to the top of cuts, would be incorporated in road cuts to help prevent snow drifting.

Culverts/Drainage Facilities. The age and condition of most existing culverts within the Broadus-East project area dictate that these drainage facilities must be replaced. MDT conducted tests at more than fifty locations within the project area to determine the corrosive characteristics of local soils. Testing showed that soils in most areas were corrosive to zinc-coated steel and aluminum and that nearly half of the samples were alkali reactive to concrete. The test results suggest the need for selecting appropriate replacement pipes to ensure long service lives.

Pipes in the Epsie-East & West and Epsie-East project areas are generally in sufficiently good condition to be used in place. However, the pipes would need to be extended due to the planned road widening and alignment shifts.

BRIDGE DEFICIENCIES

MDT periodically conducts detailed evaluations of the condition of bridges on the state highway system and on many off-system roads. The evaluations are used to develop a Sufficiency Rating to assess the condition of each bridge. The Sufficiency Rating is a composite of several ratings of individual bridge items that consider the structural condition and geometry of the bridge. A bridge with a low rating on structural items will be designated as "structurally deficient" and a bridge with a poor rating for geometry items will be designated as "functionally obsolete." Sufficiency Ratings are based on a 100-point scale.

Three bridges are located within the Epsie NHS corridor, all within the limits of the Broadus-East project. The locations, bridge types, date of construction, and Sufficiency Ratings for these bridges are listed on the following page.

Location	Structure Type	Date Built	Sufficiency Rating
Cottonwood Creek (RP 79.6)	3-span timber	1939	61.9
Powder River (RP 80.6)	4-span, steel multi-beam	1985	82.3
Little Powder River (RP86.9)	3-span, steel multi-beam	1976	87.0

The Powder River and Little Powder River bridges would be used in place. However, expansion joints at each end of the Powder River bridge are in need of replacement and rail posts need to be attached at all four corners of the Little Powder River bridge.

The bridge over Cottonwood Creek is considered "functionally obsolete" by MDT and would be replaced with a dual concrete box culvert with the proposed improvements. The existing bridge is only 8.84 m (29.0± feet) wide and cannot accommodate the planned 12.0 m (39.4± feet) wide road. The bridge also needs replacement due to its age, its deteriorated physical condition, and its inefficient hydraulic characteristics.

C. Traffic Safety

1. Accident History of the Epsie NHS Corridor

Accident summaries were reviewed to help understand the accident history of the project area during the January 1, 1990 through December 31, 1999 period. **TABLE 2** summarizes accident severity statistics for each project area and for the entire Epsie NHS Corridor during the 10-year-long study period:

Table 2: Epsie NHS Corridor Accident Summary (1990-1999)

	Epsie-East & West	Epsie-East	Broadus-East	Epsie NHS Corridor
Number of Fatal Accidents (# fatalities)	0 (0)	2 (3)	1 (2)	3 (5)
Number of Injury Accidents (# injuries)	5 (9)	7 (16)	28 (43)	40 (68)
Number of Property Damage Only Accidents	12	17	54	83
Total Number of Accidents	17	26	83	126
Accident Crash Rate (All Vehicles)	0.56	1.19	1.20	1.04
Severity Index (All Vehicles)	1.88	2.27	2.54	2.67
Severity Rate (All Vehicles)	1.05	2.70	3.05	2.78

As **TABLE 2** shows, the overall accident crash rate for the Epsie NHS Corridor was calculated to be 1.04 crashes per million vehicle miles of travel (MVMT) over the January 1, 1990 through December 31, 1999 period. This compares to a statewide average of 1.37 accidents/MVMT for all routes on the rural Primary system during the same general time period.

The severity index and severity rate are statistics commonly used by MDT as measures of the overall severity of accidents on a particular road segment or route based on the number and degree of injuries or fatalities recorded during a given period. The severity index is the ratio of the sum of fatal accidents and incapacitating injury accidents times 8, plus the number of other injury accidents times 3, plus the number of property damage accidents to the total number of accidents. The severity rate is calculated by multiplying the accident rate times the severity index.

The accident severity index for the Epsie NHS Corridor was calculated to be 2.67 and the corresponding accident severity rate was determined to be 2.78 over the 1990-1999 period. These figures compare to the statewide averages for severity index and severity rates for rural Primary roads of 2.50 and 3.42, respectively. During the ten-year study period, the accident severity index for the Epsie NHS Corridor was slightly above than the statewide average for Primary roads but the severity rate was notably lower than the statewide average.

A review of the characteristics and contributing factors to motor vehicle accidents occurring within the Epsie NHS Corridor during a recent 10-year period identified the following variations from average statewide occurrences:

Epsie-East & West Project Area

- 68.8% off road/right shoulder accidents vs. 30.3% statewide.
- 87.5% dry road accidents vs. 64.3% statewide.
- 56.3% clear weather accidents vs. 47.0% statewide.
- 75.0% daylight accidents vs. 59.2% statewide.

Epsie-East Project Area

- 38.5% of the accidents involved truck/tractor vs. 10.6% statewide.
- Overturning was the first harmful event in 30.8% of the accidents vs. 18.2% statewide.
- 26.9% of the accidents occurred on the right outside shoulder vs. 4.0% statewide.

Broadus -East Project Area

- 41.7% off road accidents vs. 29.5% statewide.
- 59.5% clear weather accidents vs. 49.2% statewide.

Throughout the NHS Corridor, the predominant accident trend is single-vehicle, off-road, overturning crashes. The road widening, slope flattening, and installation of rumble strips and delineation proposed for these highway improvement projects should improve traffic safety.

2. Truck Accidents

MDT completed a detailed study of truck and truck/tractor accidents on the Interstate and Primary Road systems in Montana for the 1991-1993 period. According to A Study of Large Trucks (MDT, 1995), the truck accident rate for the Primary system in Montana was 1.01 accidents/MVMT during the 3-year period evaluated in the study. The truck accident rates for the project areas identified in MDT's 1995 special study are as follows:

Epsie - East & West	1.64 accidents/MVMT
Epsie-East	1.64 accidents/MVMT
Broadus-East (MP 76.5 to 83.09)	4.47 accidents/MVMT
Broadus-East (MP 83.09 to 93.2)	1.02 accidents/MVMT

A comparison of these rates shows that the truck accident rates on U.S. Highway 212 and Highway 59 in the Broadus area substantially exceed the statewide Primary system average. The higher than average incidence of truck accidents may be partially due to higher than average commercial vehicle traffic using the NHS corridor.

MDT's review of the accident history for Epsie NHS Corridor also showed that 43 of the 126 reported accidents (34.1%) over recent 10-year study periods involved at least one truck/tractor. Truck/tractor accidents within the Epsie NHS Corridor during the study period were generally not concentrated at one location. However, 6 accidents were reported along a 1.9 km (1.2± mile) section U.S. Highway 212 in the Epsie-East project area. A large number of the reported truck accidents involved vehicles leaving the roadway and overturning.

As indicated previously, the proposed highway projects would include measures like a wider road surface, traversable shoulders, rumble strips, and improved delineation to help address run-off-the road and overturning accidents.

D. Overall Conclusions on Need

The existing roadway and bridges have many physical deficiencies that contribute to reduced safety for users of U.S. Highway 212 and Highway 59. Several of these deficiencies are related to the design of the roadway and can be corrected only through reconstruction.

Reconstructing portions of Epsie NHS Corridor would substantially improve road safety by bringing the design of the highway into compliance with MDT's current design standards for Rural Principal Arterials with design speeds of 100 km/h (62±mph). The width of the roadway's surface within the NHS Corridor would be increased to at least 10.8 m (35.4± feet) consistent with the minimum paved roadway width for Rural Principal Arterials with similar traffic volumes. The proposed project would improve the existing alignment within the Epsie NHS Corridor by eliminating more than thirty substandard vertical curves and two substandard horizontal curves. The proposed reconstruction projects would provide adequate stopping sight distance at deficient curves in the road's alignment.

III. Alternatives Considered

III. ALTERNATIVES CONSIDERED

A. Introduction

This Part describes the alternatives considered to address the transportation and other needs identified in Part II. Alternatives to the proposed action are the various activities to be undertaken to meet the purpose and the need (or the reasons) for undertaking the projects. This section describes the proposed improvements that comprise the Preferred Alternative. The "Preferred Alternative" is the action (or actions) that MDT believes would best meet the purpose and need for the projects, giving consideration to economic, environmental, technical and other factors. This Part also describes the range of alternatives initially considered for the proposed action and discloses reasons for the rejection of alternatives.

B. No Action Alternative

The No Action alternative (also known as the "no build" alternative) involves no major work to improve or correct existing deficiencies on U.S. Highway 212 and Montana Highway 59 within the Epsie NHS corridor. This alternative would not alter the alignment or improve the general condition of the existing roadway or bridges. However, these transportation facilities would continue to receive the minor actions needed to maintain them in acceptable condition for public use. The traffic safety and operational problems that currently exist would continue. The No Action alternative would not impact adjacent land uses or change the appearance of the highway corridor.

The No Action alternative does not meet the purpose and need for the project and has been rejected from further consideration. The principal reason that the No Action alternative is not feasible is because the highway's existing pavement has and continues to deteriorate to the extent that maintenance costs on the route are excessive. However, the No Action alternative provides a baseline against which the Preferred Alternative can be compared. The environmental effects of the No Action alternative will be discussed in Part IV as a means of comparing and contrasting the impacts of MDT's Preferred Alternative.

C. Preferred Alternative and Associated Improvements

1. Overview

The Preferred Alternative is to complete improvements to U.S. Highway 212 and Highway 59 within the Epsie NHS Corridor. The road would be reconstructed as a safe and efficient two-lane road and its design would be substantially improved over that of the existing facility.

Montana highways and bridges are designed to meet or exceed recommended minimum geometric standards. These geometric standards are based on design policies and guidelines established by MDT and the AASHTO. The projects would be developed to conform to MDT's "Geometric Design Standards" and AASHTO's Standard Specifications.

The proposed improvements would typically be accomplished following a new horizontal alignment that parallels the existing alignment. The new centerline would be offset to either the north or south sides of the existing highway through much of the Epsie NHS corridor. Offsetting the alignment has been proposed as a means of minimizing impacts on roadside utilities, avoiding sensitive environmental areas, and maintaining traffic on the route during construction of the new roadway. The vertical alignment of the new road would be designed to provide the desirable stopping sight distance for a 100 km/h (62± mph) design speed and grades would typically be 4% or less.

Site preparation work would include clearing, and grading. Much of the existing road's structure would be incorporated into the new highway facility. Drainage structures with adequate roadside ditches to accommodate runoff from the roadway would be installed and slopes would be stabilized and revegetated. V-ditches would be provided adjacent to the highway to convey runoff. New fences would be installed throughout the project corridor.

Advisory and regulatory signs would be installed according to standards outlined in the *Manual on Uniform Traffic Control Devices* (MUTCD). Guardrail would be placed in locations warranted by roadside slope conditions.

Estimated construction costs for rebuilding the Epsie NHS Corridor would total about $27.8 million. This total includes about $8.3 million for the Epsie - East & West project, $6.0 million for Epsie - East, and $13.5 million for the Broadus - East project. Continued use of the existing facility and appropriate signing, flagging and detours would be used to minimize delays and inconveniences for the traveling public during construction.

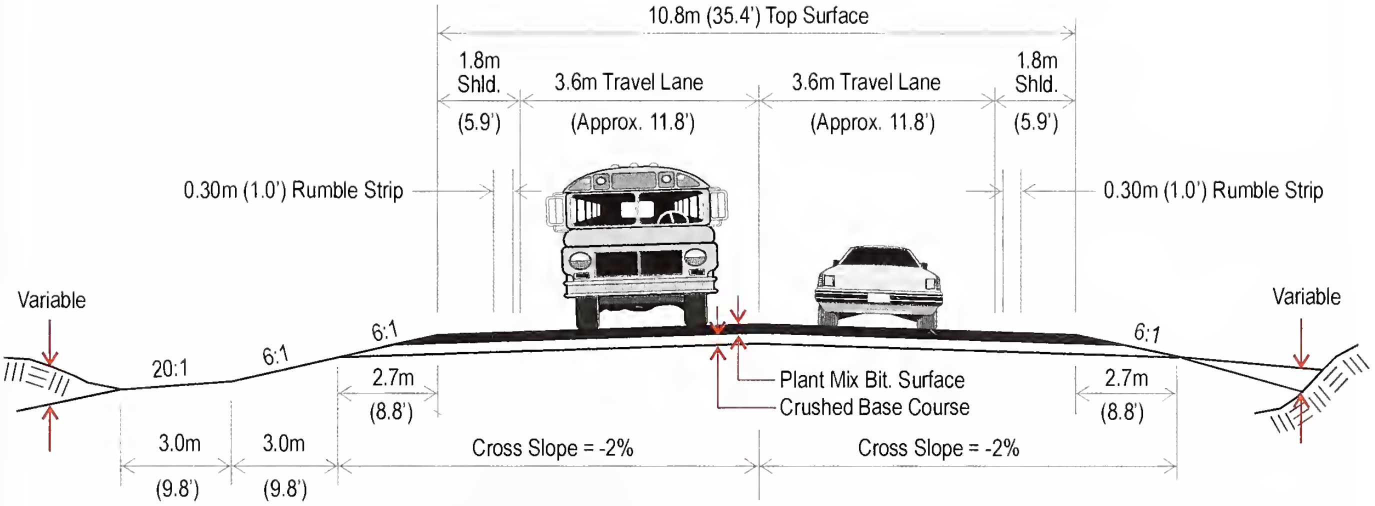
2. Design Speed/Posted Speed Limits

Throughout the rural areas of the Epsie NHS Corridor the road would be designed for 100 km/h (62± mph). Within the Broadus "urban" area the design speed would be reduced to 45 km/h (28± mph). All design features would meet the criteria for these identified design speeds.

The speed limit for rural portions of the NHS corridor is 112 km/h (70 mph) in the daytime and 105 km/h (65 mph) at night. The posted speed limit is 50 km/h (30 mph) through the community of Broadus. These posted speed limits would remain unchanged with the Preferred Alternative.

3. Typical Road Cross-Sections

The proposed typical road cross-sections are presented in **FIGURES 4** and **5**. Throughout the Epsie-East & West and Epsie-East segments of the NHS Corridor, the new roadway would typically have an 10.8 m (35.4± feet) wide finished top surface accommodating two 3.6 m (11.8± feet) wide travel lanes and two 1.8 m (5.9± feet) wide shoulders. Within the Broadus-East project area, rural portions of the highway would have an 11.6 m (38.0± feet) wide finished top surface. The new road would have a 12.0 m (39.4± feet) wide finished top surface with curbs and gutters within the Town of Broadus.

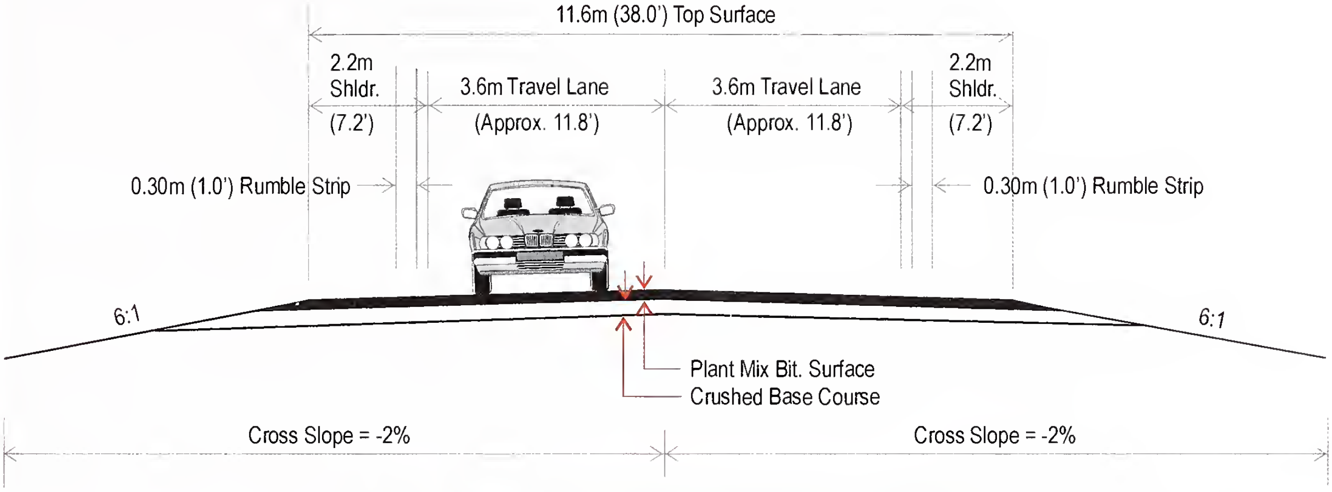


Rural NHS Segments (Epsie East & West & Epsie - East)

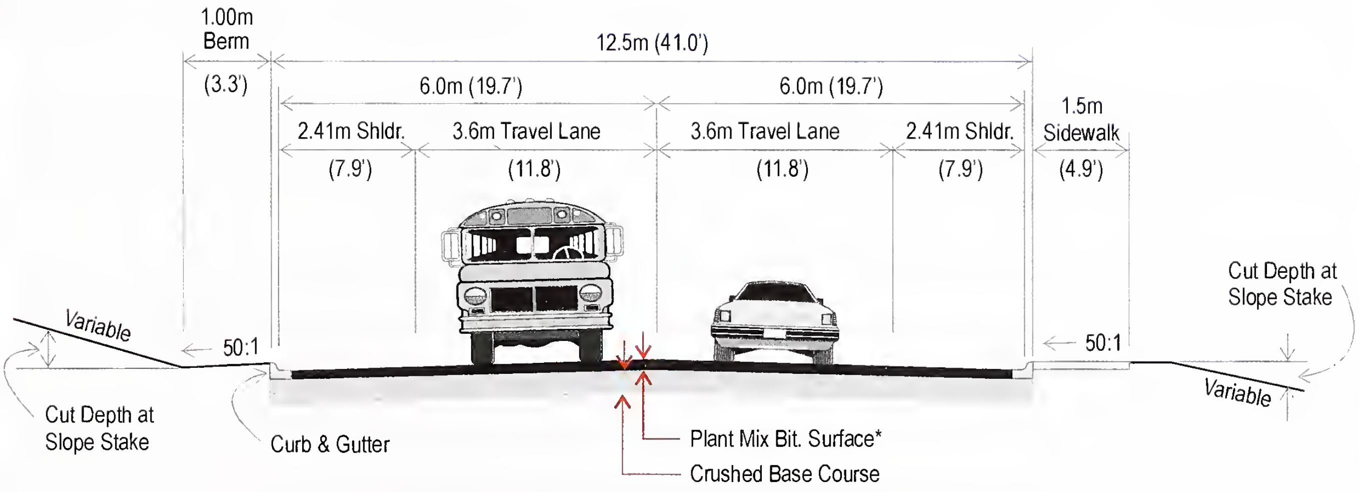
Not To Scale

Figure 4
Typical Road Cross Section - Epsie E. & W. & Epsie - East Projects

sections


11.6m (38.0') Top Surface
2.2m Shldr. (7.2')
3.6m Travel Lane (Approx. 11.8')
3.6m Travel Lane (Approx. 11.8')
2.2m Shldr. (7.2')
0.30m (1.0') Rumble Strip
0.30m (1.0') Rumble Strip
6:1
6:1
Plant Mix Bit. Surface
Crushed Base Course
Cross Slope = -2%
Cross Slope = -2%

Rural NHS Segments (Broadus - East)



Broadus - East Urban NHS Segment

*Intersection of Park & Holt would be constructed of Portland Cement Concrete Pavement instead of bituminous surfacing.

Not To Scale

typsect2

Figure 5
Typical Road Cross Sections - Broadus - East Project

The highway would be constructed with a plant mix bituminous (asphalt) surface over the top of a crushed gravel base course. Consideration has also been given to the use of cement treated base (CTB) material as a foundation for the new road. The intersection of Park Avenue and Holt Street in Broadus would be reconstructed with Portland Cement Concrete Pavement for durability reasons. Within the Town of Broadus, Holt Street comprises the east-west section of U.S Highway 212 and Highway 59 and Park Avenue is the north-south section of the highway. The pavements of the new road would be designed to last at least 20 years.

4. Realignments

The majority of the proposed improvements would be made along the existing alignments of U.S. Highway 212 and Montana Highway 59. Notable shifts in horizontal alignment are identified below:

Epsie-East & West: The proposed centerline for U.S. Highway 212 in the project area would be shifted to the north shoulder of the existing highway to minimize conflicts with utilities. This proposed centerline shift would match the offset used on MDT's recently completed Camps Pass-East project that adjoins the west end of the project.

Epsie-East: Similar to the Epsie-East & West segment, the proposed centerline of U.S. Highway 212 would be offset slightly north of the existing highway.

Broadus-East: The proposed horizontal alignment project includes the realignment of a curve near the beginning of the project and three areas where the proposed centerline would shift about 20 m (66± feet) north or south of the highway's present centerline.

Additionally, a departure from the existing alignment is proposed for the area west of the Little Powder River crossing between project stations 82+00 and 113+00. This realignment, identified as the "Little Powder River Realignment," would shift the highway away from several residents and eliminate a reverse horizontal curve that occasionally presents winter maintenance problems. The Little Powder River Realignment would construct approximately 3.4 km (2.1± miles) of the route on a new location south of U.S. Highway 212. The proposed realignment would decrease the overall length of U.S. Highway 212 in this area by about 49 m (161 feet). A drawing showing the location of this planned realignment area is provided as **FIGURE 6.**

Prescriptive, temporary, or permanent easements for existing highway right-of-way abandoned as a result of the proposed improvements to the Epsie NHS Corridor would revert to adjoining landowners. However, if any rights-of-way are held in fee and were acquired under **Title 23**, MDT must complete an environmental document and fair market value is normally required for sale of the property [23 CFR 710.403 (c) and (d)]. If a public benefit can be shown, sale by MDT can be at less than market value. Therefore, the right-of-way would not be abandoned but offered up for sale at fair market value in such instances.

5. Stream Crossings/Bridges and Culverts

Epsie East & West: All stream crossings within the project area are spanned with culverts. All but two of the culverts within the project area would be left in place and extended as required. MDT proposes to place an insert into one culvert and replace the other existing culvert. Minor channel changes are planned at one site on Mizpah Creek.

Epsie-East: There are no bridges located within the project area. Culverts placed beneath the road perpetuate surface drainages crossed by the highway. If culverts have sufficient service lives remaining, they would be used in place and extended.

Broadus-East: The existing highway crosses the Powder River, Little Powder River, and the East Fork of the Little Powder River. The existing bridges over the Powder River and the Little Powder River would be used in place with minor upgrades and maintenance. The expansion joints at both ends of the structure and the existing guardrail would be replaced at the Powder River bridge. At the Little Powder River crossing, rail posts would be added to the backwall on all four corners of the bridge and the existing guardrail would be replaced. The existing culvert at the East Fork Little Powder River would be used in place. All other culverts serving minor drainages and intermittent streams would be replaced with the proposed project. The existing timber bridge over Cottonwood Creek in Broadus would be replaced with a new reinforced box culvert.

6. Intersections and Approaches

Public and private approaches would be designed and reconstructed to fit local conditions and in a manner that would ensure safe entry and exit from the highway. Approaches would typically be aligned to intersect the roadway at angles between 75 and 90 degrees to provide adequate sight distance. MDT proposes to pave public and private approaches to the right-of-way line. Field approaches (those approaches that provide access only to pasture or farmland) would receive a 3.6 m (11.8± feet) wide paved strip extending a short distance from the roadway and gravel surfacing to the new right-of-way line. All slopes for approaches would be designed to current MDT standards.

The intersection of Holt Street and Park Avenue in Broadus would be reconfigured to improve traffic operations. MDT proposes to install a right-turn lane for eastbound vehicles turning south onto Park Avenue and would incorporate improved turning radii into the design of the intersection. Permanent traffic control features would be added to the intersection including: changing the intersection from a 3-way stop to a 4-way stop; upgrading advance intersection warning signs; and upgrading the warning flasher to current standards. New pavement markings would also be provided at the intersection.

Left and right turn lanes would be constructed in the Broadus-East project area at the existing weigh scale/visitor center (RP 81), allowing through traffic movements while trucks enter the facility. Left and right turn lanes would also be provided at the intersection of U.S. Highway 212 and Montana Highway 59 (RP 83.1).

7. Stockpasses

Three combined stockpasses and drainage pipes exist within the limits of the Epsie East & West

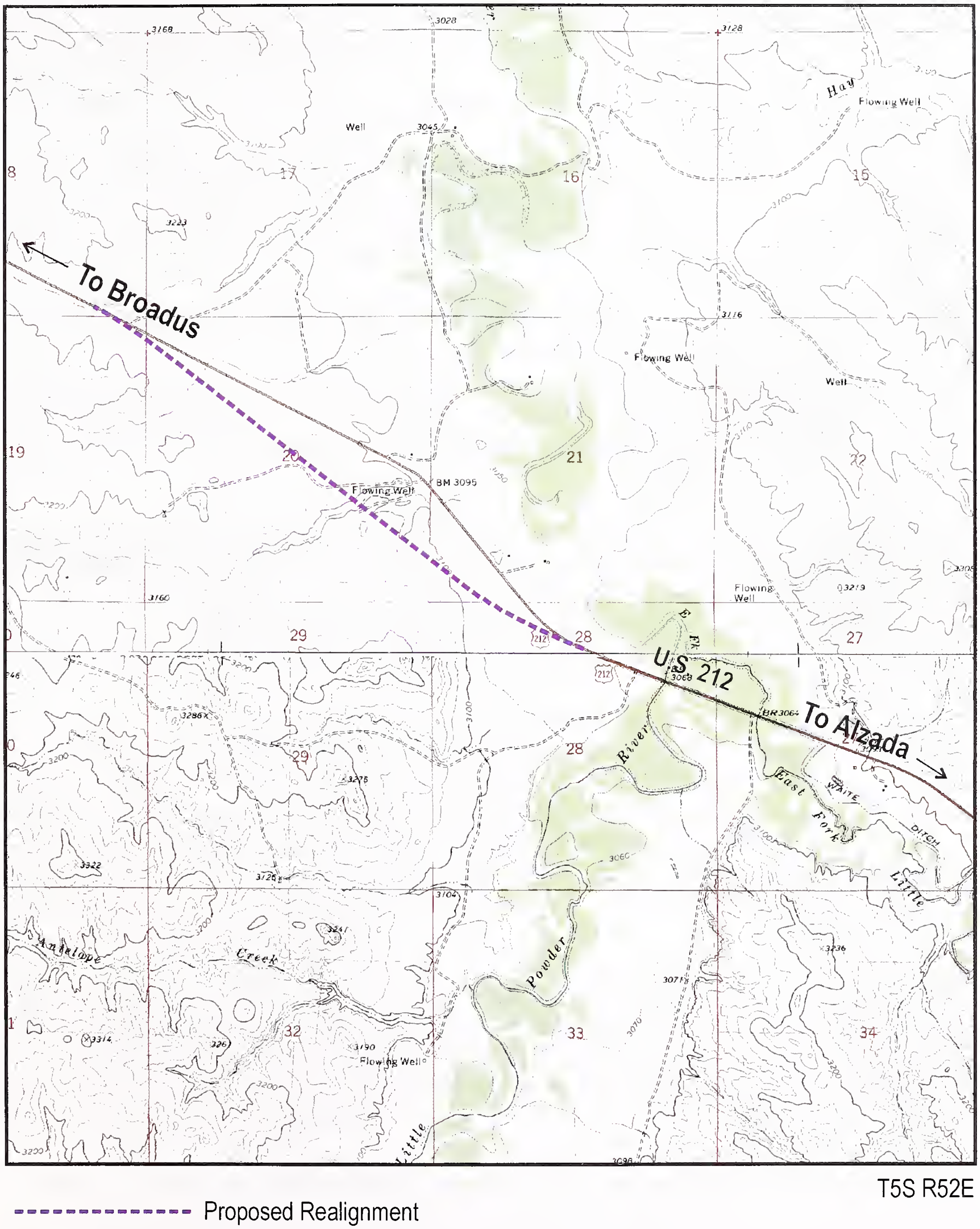


Figure 6
Little Powder River Realignment

project. MDT plans to evaluate these structures to determine if they can be extended in place and reused. If the structures must be replaced they would be designed to adequately handle drainage requirements and stock passage beneath the highway.

No stock passes exist in the Epsie-East project area.

Five structures within the Broadus-East project area have historically been used as stockpasses. MDT would determine if these facilities would be perpetuated during right-of-way negotiations with adjoining landowners. A new stockpass would be constructed at a location about 1 km (0.62± miles) east of the Powder River crossing.

8. Curb and Gutter, Sidewalks, and Bike Path

The proposed Broadus-East project would provide curb and gutter along portions of the roadway in the immediate Broadus area. Sections of curb and gutter would be installed along 500 m (1,640± feet) of the highway at the north edge of the community and along Holt Street and Park Avenue.

Within Broadus, the curb and gutter section would begin west of Jensen Avenue (near the Tastee Freeze) and end south of the Cottonwood Creek crossing. A new storm drainage system would be provided along Holt and Park in Broadus that would include drop inlets and an outfall line down Haston Street. New sidewalk would also be built along the south side of Holt Street (beginning near Jensen Avenue) and along the west side of Park Avenue (ending near Cottonwood Street).

An existing walkway/bike path west of Broadus along the south side of the road would be affected by construction. MDT would reestablish this 698 m (2,290± feet) long section of walk/bike path along the south side of the highway adjacent to the right-of-way line. Additionally, a section of walk/bike path would be built along the west side of the highway south of Cottonwood Street. The path would begin where the proposed sidewalk ends along Park Avenue and continue 630 m (2,067± feet) south to the edge of the community's developed commercial area. The bike path would have a 1.8 m (5.9± feet) wide plant mix surface and would be separated from the roadway.

Powder River County plans to construct a bike/pedestrian path from Sullivan Street southeasterly to the Powder River. The new path would be located adjacent to the existing west right-of-way line for U.S. Highway 212 in the southeast part of Broadus. The new path would be designed into the proposed Broadus - East project but would be funded with Community Transportation Enhancement Program (CTEP) funds.

D. Build Alternatives Considered But Rejected

1. Reconstruct with an 8.5 m (28.0± feet) Finished Top

During the early 1990s, MDT's intentions for reconstructing U.S. Highway 212 and Highway 59 through much of the project corridor were to widen the existing subgrade for the road to accommodate a future 10.8 m (35.4± feet) wide paved road. Although the subgrade would be widened, MDT intended to follow the existing horizontal and vertical alignments as much as possible, install new surfacing to provide an 8.5 m (28.0±feet) wide finished top width, flatten roadside slopes and make other safety improvements.

During 1993, MDT determined that the Epsie-East & West project and rural sections of the Broadus-East project should be reconstructed to provide a 10.8 m (35.4± feet) wide finished top surface instead of an 8.5 m (28.0±feet) wide finished top. This decision was made to ensure consistency with MDT's NHS Route Segment Plan. For this reason, rebuilding the roads to a standard 8.5 m (28.0±feet) width was rejected.

2. Reconstruction Following the Existing Centerline

Reconstruction following the existing centerline within the Epsie NHS Corridor was considered by MDT but rejected for a variety of reasons. As indicated above, MDT initially planned to rebuild U.S. Highway 212 and Highway 59 following its existing horizontal alignment with a few minor exceptions. The implementation of adjoining projects on U.S. Highway 212 west of the project corridor resulted in notable traffic reductions as motorists, including many commercial haulers, avoided travel through the area during the construction period. Adverse economic effects were felt in communities along the route during this period. This reaffirmed the need to maintain traffic flows on this important travel route throughout the construction of the Epsie NHS Corridor projects.

Building on the existing centerline was rejected from consideration because of the high costs associated with maintaining traffic on the road during construction. Since the Contractor would be obligated to minimize delays to motorists, significant amounts of time and effort would have to be devoted to maintaining a passable road surface in the corridor and controlling traffic within work zones. The preferred sequencing of work activities could be affected by building the new road on the existing centerline and under traffic. Conflicts would inevitably arise between through traffic, construction personnel, and the operation of construction equipment if the road were rebuilt following the existing centerline. Therefore, notable concerns for the safety of construction personnel and the traveling public exist with this alternative.

Another reason for rejecting this alignment option is the potential for conflicts with utilities that exist along both sides of the existing highway. Such conflicts can be avoided (and cost savings realized) if the road is judiciously offset to one side of the existing facility rather than built on the existing centerline.

3. Follow an Offset Alignment West of the Little Powder River

In the area of the Little Powder River Realignment (Project stations 82+00 and 113+00), MDT also considered the option of rebuilding U.S. Highway 212 on an offset alignment either north or south of the existing road as proposed in the remainder of the Broadus-East project area. However, this alignment option was eliminated from consideration because of concerns over roadway geometrics, winter maintenance requirements, conflicts with agricultural operations, and potential impacts to at least two residences in the realignment area.

The existing highway in the realignment area west of Little Powder River has short, non-standard curves and a vertical curve that often traps snow in the winter. Offsetting the alignment as proposed for other adjoining sections of the Broadus - East project, would allow MDT to improve the non-standard horizontal alignment of the road but, without a notable grade raise, would do little to improve the snow-drifting problem associated with the road's vertical alignment.

Offsetting the alignment to the north side of U.S. Highway 212 would result in several notable adverse impacts. The adverse impacts discussed below provide the primary reasons why MDT dropped the idea of a offsetting the new road to the north of the existing highway.

- The new road would be moved closer to several existing residences in the area and depending upon the extent of the offset, at least one residence could have to be relocated. The nearest residence is located only about 50 m (165 feet) from the centerline of the existing road. Offsetting the alignment by up to 20 m (65 feet) as being proposed elsewhere in the Broadus-East project area, would place centerline of the new road to within about 30 m (100 feet) of the nearest residence.

- Shifting the road to the north would represent a visual intrusion and would likely increase highway-related noise for affected residents.

- One or both of the horizontal curves in the realignment area would have to be perpetuated. Any substantial variation from the existing alignment would require amounts of new right-of-way comparable to that associated with building on an entirely new alignment.

- The reconstructed highway would continue to separate adjoining agricultural operations for at least one of the residents in the realignment area.

- Offsetting the alignment to the north could affect a small wetland area.

Due to the potential adverse effects to several residences that would result from a northerly shift of the road, MDT also reviewed the option of offsetting the road to the south side of the existing highway. Although impacts to residences in the area would be lessened, the potential adverse effects to agricultural operations and facilities on lands adjacent to the highway and landowner opposition were sufficient reasons for MDT to eliminate this alignment option. The major reasons MDT discarded the alternative of rebuilding U.S. Highway 212 on an alignment offset to the south of the existing road are described in the following paragraphs.

- Like offsetting the road to the north, a southerly offset would necessitate that one or both of the horizontal curves in the realignment area be perpetuated. Any substantial variation from the existing alignment would require amounts of new right-of-way comparable to that associated with building on an entirely new alignment.

- Although the new road would be further away from the residences in the area, associated agricultural facilities and operations would be substantially disrupted. Such an alignment would impact a well and distribution piping used to water livestock and other facilities used to feed and shelter livestock during the winter.

- The reconstructed highway would continue to separate adjoining agricultural operations for at least one of the residents in the realignment area. The owner of most of the property in the realignment area favored the proposed realignment over any offset alignment due to the potential impacts to his agricultural operations.

- The potential exists to affect a small wetland area south of the highway.

TABLE 3 presents a comparison of the environmental effects and costs of realigning U.S. Highway 212 as proposed versus rebuilding the highway on an offset alignment through the area immediately west of the Little Powder River.

Table 3: Comparison of Environmental Effects/Costs Little Powder River Realignment Vs. Rebuilding on or Near the Existing Alignment

Environmental Category	ALIGNMENT ALTERNATE	
	Little Powder River Realignment (Preferred)	***Rebuild On/Near Existing Alignment***
Right-of-Way	Estimated Total R/W needed for project with proposed realignment = 205.1 acres (83.0 ha) The Little Powder River Realignment would affect five landowners, with the majority of the new right-of-way for the realignment being needed from the T & C Smith Ranch. Realignment would require about 37.5 (15.2 ha) acres more R/W than offsetting the existing alignment.	Estimated Total R/W needed for project without proposed realignment = 167.6 acres (67.8 ha) The same landowners would be impacted by an offset alignment.
R/W Costs	Additional cost of R/W for the proposed realignment was estimated assuming 37.5 acres (15.2 ha) more R/W is needed than for offsetting the alignment. MDT appraisers estimate the cost of grazing land to be $160 per acre and $250 per acre for property where hay is cut. Since the land affected by the realignment is mostly grazing land, the estimated total R/W land costs would be about $6,000 higher than for an offset alignment.	Not calculated since the difference in the amount of new R/W needed was calculated from above estimates.
Relocations	No residences or businesses would need to be relocated.	Depending on the extent to which the new road was offset to the north of US 212, at least one residence could be impacted enough to require a relocation.
Utilities and Other R/W Impacts	The proposed realignment would require adjustments to conflicting utilities at each end of the realignment area and possibly the installation of new lines adjacent to the realigned highway. It is possible utility companies could leave existing facilities in place through realignment area to serve existing residents. Realignment would require easements and the construction of approaches and access roads from the new highway location to two nearby residences. New farm field approaches would be needed.	Overhead power lines, underground telephone cables, and buried fiber optics line exist adjacent to both sides of the roadway throughout the Epsie NHS Corridor. Some of these utilities may be in conflict and require relocation if the highway is rebuilt on or near its present location. Existing approaches to residences and farm fields would have to be modified due to the offset alignment.

Environmental Category	ALIGNMENT ALTERNATE	
	Little Powder River Realignment (Preferred)	***Rebuild On/Near Existing Alignment***
Construction Costs	MDT compared the costs of constructing the proposed realignment and building on an offset alignment near the existing road. This comparison showed the Little Powder River Realignment would cost about $170,000 more to construct than rebuilding on and offset alignment. The principal reasons for the higher cost are the additional grading (excavation) and roadway obliteration associated with realigning the highway. Reconstruction along the proposed realignment route would reduce future maintenance costs slightly since the overall length of U.S. Highway 212 in this area would be decreased by 47 m (155 feet). Traffic control costs would be far lower than those associated with rebuilding on an offset alignment since traffic could be maintained on the present highway while work the new alignment is being built. Traffic control would be required primarily at the beginning and end of the realignment section.	Average per mile construction costs for an offset alignment projects were developed using Epsie-E & W and Epsie-East estimates. Based on this information the average construction cost was about $770,000 per mile. The estimated cost for the realignment area would be about $1.617 million. Building on an offset alignment would require substantial amounts of borrow material. Since building on an offset alignment does not require making new cuts in the area, borrow material would have to be imported from elsewhere. MDT would be obligated to maintain traffic through the construction zone. Traffic control costs typically represent about 5% of the estimated construction cost or about $81,000.
Important Farmland Involvement	Realignment would directly convert about 6.14 ha (15.17 acres) more important farmland than if U.S. Highway 212 were reconstructed following an offset alignment. A *Farmland Conservation Impact Rating* form was completed for the Epsie NHS Corridor projects and the resulting score showed no need for further consideration for protection.	Conversion of "farmland" in the Broadus-East corridor would not represent a substantial loss of important farmland in Powder River County.
Air Quality Impacts	Air quality impacts are not a project concern due to low traffic volumes and the high existing air quality of the project area. No discernable difference with proposed realignment.	
Water Quality Impacts	Reconstructing U.S. Highway 212 following the route of the proposed Little Powder River Realignment would encounter the same intermittent streams as those crossed by the existing highway. Consequently, the impacts of constructing the highway on a new route through this area would be similar to those associated with rebuilding on or near the existing highway.	U.S. Highway 212 crosses minor intermittent streams in the realignment area. Land disturbances would occur adjacent to the new road due to the alignment shift and proposed road widening. An Erosion Control Plan employing Best Management Practices for controlling erosion and sediment transport would have to be implemented.

Environmental Category	ALIGNMENT ALTERNATE	
	Little Powder River Realignment (Preferred)	***Rebuild On/Near Existing Alignment***
Water Quality Impacts (continued)	Building on a new alignment would likely disturb a greater surface area than if the road were rebuilt on or near the existing alignment. This would increase the potential for erosion during construction; however an Erosion Control Plan would be implemented to minimize such effects.	An offset to the south of the existing road could adversely affect a well that serves as a source for livestock watering.
Wetlands Impacts	The proposed Little Powder River Realignment would not impact either Wetland Site 21 or 22, the only sites delineated in the realignment area.	Rebuilding the highway on or near the existing facility in this area would likely affect Wetland Site 21 since shifting the road southward would be the only way to reduce or eliminate a problematic curve. Less than 0.1 ha (0.24 acres) of impact would be expected at Wetland Site 22 if the new road were built immediately south of the existing highway.
Vegetation Impacts	The Little Powder River Realignment represents a notable departure from the location of the existing highway and it would require that vegetation be permanently cleared to establish the new alignment. The proposed realignment would require clearing over most of the estimated 37.5 acres of new right-of-way area to accommodate construction of the new road segment. This loss of vegetation would be offset in part by obliterating the old section of U.S. Highway 212 and revegetating the former right-of-way.	The proposed highway improvements along an offset alignment would result in the permanent loss of vegetation where the roadway is realigned and widened. This loss would occur to a large degree within the highway right-of-way and previously disturbed areas adjacent to the road.
T/E Species Impacts	Reconstructing U.S. Highway 212 on either the proposed realignment or an offset alignment near the Little Powder River would cause little, if any, effects to threatened or endangered species.	
Wildlife Impacts	Highway reconstruction on the proposed new alignment would result in the permanent loss of minor amounts of habitat and temporarily displace some species. The proposed realignment would place the highway south of a large hay storage area. Deer would no longer cross the highway to access this attractive food source. Local deer populations would benefit since the opportunity for motor vehicle collisions would be substantially reduced in this area. Traffic safety would indirectly benefit if the risk of encountering deer on the highway were reduced.	The shifts in alignment, road widening, and slope flattening associated with the rebuilding on or near the present highway would result in the permanent loss of minor amounts of habitat adjacent to the roadside. Wildlife species that rely upon these roadside areas for habitat would be temporarily displaced during construction due to noise and human activities. Deer occasionally cross U.S. Highway 212 in the realignment area while moving from tree cover along the Little Powder River north of the road to a large hay storage area south of the road. Motorists are at risk of colliding with deer moving to feed on stored hay.

Environmental Category	**ALIGNMENT ALTERNATE**	
	Little Powder River Realignment (Preferred)	***Rebuild On/Near Existing Alignment***
Fisheries Impacts	Fisheries resources would not be affected by either alignment alternate.	
Land Use Impacts	The Little Powder River Realignment would not change the use of adjoining lands. Livestock grazing would continue. With the proposed realignment, U.S. Highway 212 would be shifted away from homes near the each end of the proposed realignment benefiting residents with reduced traffic noise levels and increased privacy. The realigned highway would allow at least one area resident to consolidate agricultural operations since there would no longer be a need for the owner to cross the highway to reach livestock containments and a hay storage area. Movements of farm equipment or livestock would no longer be in conflict with through traffic on the highway.	Reconstructing the road on an offset alignment would cause few, if any, adverse effects on land use in adjoining areas since affected properties are primarily used for livestock grazing and a limited amount of hay production. Reconstructing the highway on or near the present alignment would continue to divide adjoining agricultural operations for at least one of the residents in the realignment area. Movements of farm equipment or livestock would have to be accomplished with caution due to potential conflicts with high-speed traffic on U.S. Highway 212. An offset alignment could impact a well and distribution piping used to water livestock and other facilities used to feed and shelter livestock during the winter.
Social Impacts-Environmental Justice	This proposed action would not have any significant impact on the location, distribution, density or growth rate of the population of the Broadus area or Powder River County. The proposed highway reconstruction projects would not adversely affect any social or ethnic groups and it would not isolate or divide existing residential areas.	
Economic Impacts	The proposed project would improve the quality of travel on an important interstate freight transportation route and travel corridor. Improvement of the route could result in increased travel within the corridor, particularly by commercial transporters. This could indirectly benefit the local economy, as additional highway users would have the opportunity to stop in of Broadus to purchase goods and services. Improved safety for road users would decrease the potential for serious motor vehicle accidents. The associated economic costs associated with treating victims of fatal and injury accidents would be decreased accordingly.	
Historical and Cultural Resources	No cultural properties were identified that would be affected by either the preferred realignment or by reconstructing the road on or near the existing highway. No discernable difference with the Little Powder River realignment.	
Section 4(f) and LWCF Section 6(f) Impacts	No 4(f) or 6(f) involvement would occur with either the preferred realignment or reconstructing U.S. Highway 212 on or near the existing alignment.	

Environmental Category	ALIGNMENT ALTERNATE	
	Little Powder River Realignment (Preferred)	***Rebuild On/Near Existing Alignment***
Noise Impacts	With the proposed realignment, U.S. Highway 212 would be shifted away from residences near the east end of the proposed realignment benefiting residents with reduced traffic noise levels. This could be important over the long term if commercial truck traffic increases as a result of facility improvements on U.S. Highway 212. Realignment as proposed would have a beneficial effect over an offset alignment, as traffic-related noise would be shifted away from two residences.	Reconstruction on or near the existing facility would not require substantial changes in the road's horizontal or vertical alignments and would not increase the number of through traffic lanes on U.S. Highway 212. For these reasons and because of the rural location, traffic noise level increases would be insignificant. Two residences exist north of the highway in the vicinity of the proposed realignment. An offset to the north of the existing road would move the highway closer to existing residences, increasing highway-related noise for their occupants.
Visual Impacts	The shift in the road's location in the vicinity of the Little Powder River Realignment would cause minor changes in the views of foreground and background landscapes. The view of the new road would also be changed for the residents of a ranch house near the eastern end of the proposed realignment since the road would be shifted further away from the residence. The amount of disturbed area (temporary visual impact) would be greater with the realignment alternate since the road would be built on a "new location" and some former highway areas would be obliterated.	Few permanent visual changes would occur or be noticeable if the road were rebuilt on an offset alignment. Visual changes during construction would include surface disturbances and clearing until revegetation occurs; temporary sign installations; the storage of excavated material, equipment, and material; and dust and debris from construction activities.
Pedestrian and Bicycle Provisions	Wider road shoulders would be available for use by pedestrians and bicyclists thus increasing safety for these highway users.	
Traffic Safety	Although difficult to quantify, minor decreases in accident rates and severity would be expected if U.S. Highway 212 were reconstructed following the proposed realignment. Road design and construction would address safety issues by increasing the width of the roadway, flattening fill slopes adjacent to the road, adjusting grades, curve radii, surfacing, and sight distance, and incorporating other safety measures to produce a roadway that is safe for its intended use. These measures would reduce the chances for and severity of accidents.	The accident rate in the realignment area was estimated to be 0.86 acc/MVMT and the severity rate was calculated to be 2.57 over the past 10 years. These figures are lower than corresponding rates for the Broadus-East project area and for all statewide NHS Primary routes during the same general period of time. The existing highway in the realignment area west of Little Powder River has short, non-standard curves and a vertical curve that traps snow in the winter.

Environmental Category	ALIGNMENT ALTERNATE	
	Little Powder River Realignment (Preferred)	***Rebuild On/Near Existing Alignment***
Traffic Safety (continued)	Rebuilding U.S. Highway 212 following the Little Powder River Realignment would allow MDT to develop a vertical and horizontal design for the road that would minimize snow-drifting problems.	Offsetting the alignment as proposed for other adjoining sections of the Broadus - East project, would allow MDT to increase the width of the roadway, improve the road's condition, and adjust the horizontal alignment to satisfy geometric design criteria for the selected design speed. However, without a notable grade raise, building the road on an offset alignment would do little to improve the snow-drifting problem associated with the road's vertical alignment.

Based on the comparison of potential environmental effects and the evaluation of associated costs and benefits summarized in **TABLE 3**, MDT eliminated the option of rebuilding U.S. Highway 212 on an offset alignment near the existing road in the area west of the Little Powder River. The reasons MDT prefers the Little Powder River Realignment over an offset alignment in this portion of the Broadus-East project area are summarized below:

- Although the costs associated with acquiring a new right-of-way corridor and building a new road along the realignment route are higher than for an offset alignment, these costs are not significantly higher. An offset alignment would result in higher traffic control costs than building on the proposed realignment.

- Building on an offset alignment would require that a substantial amount of borrow material be imported to construct the new road. An offset alignment would not provide the cuts needed to generate embankment material.

- The Little Powder River Realignment would move the road away from several residences near the existing highway. Residents would benefit from reduced traffic noise and the removal of the visual intrusion presented by the present highway.

- The realigned highway would not sever agricultural operations or disrupt livestock watering and feeding operations. In fact, such an alignment would allow at least one area resident to better consolidate livestock operations since the highway would no longer be between the residence's home and a large hay storage area.

- Realigning U.S. Highway 212 may provide some benefits for resident deer populations. Deer often cross the present highway during their movements from riparian cover along the Little Powder River to feed at locations in the project area where hay is typically stored for livestock. With the proposed realignment, deer would no longer cross the highway to reach hay storage areas. This would reduce the potential for motorists to encounter deer on the road and associated deer mortalities.

- The alignment proposal was discussed with impacted landowners and preferred over an offset alignment near the existing highway. Staff from MDT's Glendive District have met with affected property owners and presented the proposed realignment to them during individual meetings in late 1999. Landowners were receptive to MDT's proposed alignment revision in this area.

4. Other Alternate Alignments for the NHS Corridor

Other locations for U.S. Highway 212 and Highway 59 in the Epsie NHS Corridor were initially reviewed but quickly eliminated from consideration by MDT due to the potential for adverse environmental effects and for cost reasons. The existing alignment provides the most direct route between the communities it serves and the traveling public would benefit little by relocating the highway.

The existing route has been a significant factor in how development has occurred in this part of Powder River County and substantial variation from the present alignment would be detrimental to local residents and land uses. Rebuilding the road on a substantially new alignment would sever farmlands and pastures and could result in more impacts to sensitive resources like wetlands or habitats for threatened or endangered species. MDT would also incur large costs for acquiring rights-of-way for a new highway corridor and it is likely the existing highway would have to remain in place to preserve access to residents and adjoining agricultural lands. If this occurred, the new alignment would have to be maintained by MDT and the old highway would have to be maintained by Powder River County or adjoining landowners. The costs of building on a new alignment would be extraordinary if new bridges were required across the Powder and/or Little Powder Rivers.

An estimated 138.8 hectares (ha) or 342.3 acres of additional right-of-way would be needed to reconstruct the Epsie NHS Corridor projects on the proposed offset alignment and following the Little Powder River Realignment. Rebuilding the highway on a totally new alignment (except for the area within Broadus) would require an estimated 338 ha (835 acres) or 2.5 times more right-of-way than supplementing the existing corridor. Using an average value of \$395/ha (\$160/acre) for new right of way, the cost of acquiring right-of-way (land only) for the offset alignment would be about \$54,800. This compares to an estimated \$133,600 in land costs for a totally new right-of-way corridor for the highway.

IV. Affected Environment

IV. AFFECTED ENVIRONMENT

A. Introduction

This Part of the EA describes the existing environment in the vicinity of the Epsie NHS Corridor. The discussion includes both the natural and human environments in the areas that would likely be impacted by the proposed improvements on U.S. Highway 212 and Montana Highway 59. Resources likely to be affected were identified through agency contacts, literature reviews, research and field studies, and public involvement activities.

B. Natural Environment

1. Landform and Physiography

The Epsie NHS Corridor is located within the northern portion of the Great Plains Physiographic Province of the United States. The project area lies within the Powder River Basin, a region of southeastern Montana and northeastern Wyoming, which was formed by the Tongue and Powder Rivers more than 2 million years ago. The Tongue River and Powder River continue to flow through the project area and eventually join the Yellowstone River. The Tongue River Breaks, an extensive area of uplands, forms the divide between the Tongue River and Powder River drainages.

The Powder River Basin is characterized by rolling, eroded uplands with occasional isolated ridges or outcrops. Some of these resistant formations rise well above the surrounding plains and support moderate stands of Ponderosa pine and Rocky Mountain juniper.

Surface elevations in project area range from approximately 915 m to 1,067 m (3,000 to 3,500 ft). The Powder River, Little Powder River, Pumpkin Creek, and Mizpah Creek are the main streams draining the Epsie NHS Corridor. These waterways generally flow northward and are tributaries of the Missouri River.

2. Geology and Soils

Area Geology. The geology of the project area is the product of cycles of continental uplift, erosion and deposition, glacial action, and climate. The hills and prominent outcrops in the project area are typically weathered beds of sedimentary rock from the late Cretaceous age (65 million years ago). Many outcrops consist of the resistant Tongue River sandstone associated with the Fort Union formation (David Alt and Donald W. Hyndman, *Roadside Geology of Montana*, 1986). Also common in the general area flat topped, steep sided hills and escarpments capped by a layer of reddish rock known as "clinker." Clinker was formed when layers of shale and sandstone were baked or melted by the burning of underlying coal seams in ancient times.

The Broadus area also contains productive oil and gas fields and vast deposits of coal. The most notable of these natural resource producing areas include the Bell Creek oil field located some 32 km (20 miles) southeast of Broadus and the Pumpkin Creek coal field which is crossed by U.S. Highway 212 west of Epsie.

Within the last 10,000 years, glaciers and continued erosion and deposition of sedimentary rocks have modified the geology of the area. Rivers and streams have migrated back and forth across valley floors as evidenced by broad floodplains and meandering channels. Erosion and deposition continues to modify the landscape although the changes occurring are almost imperceptible.

Important Soils. The U.S. Department of Agriculture Natural Resources Conservation Service (NRCS) in Broadus was contacted during March 2000 to identify important soils that may be affected by the Epsie NHS Corridor improvements. The *Farmland Policy Protection Act* (FPPA) **(7 U.S.C. 4201 et. seq.)** requires special consideration be given to soils that considered as prime farmland, unique farmland, or farmland of statewide or local importance by the NRCS.

The NRCS District Conservationist identified twenty-four soils crossed by U.S. Highway 212 and Highway 59 as either "Prime Farmland If Irrigated" or as "Farmland of Statewide Importance." The designation Prime Farmland If Irrigated means that if these soils are currently being irrigated then they would be considered Prime Farmland. If they are not irrigated, then the soils do not meet the criteria for Prime Farmland.

The following important soils (listed by soil symbol and name) were identified as being in the Epsie NHS Corridor project area. Soils meeting the "Prime Farmland If Irrigated" designation are highlighted with an asterisk (*).

Fo	Fort Collins silt loam, (0-2% slopes)*
Fr	Fort Collins silt loam, (2-4% slopes)*
Gf	Glenberg fine sandy loam, (0-2% slopes)*
Hc	Haverson silt loam *
Hd	Haverson silty clay loam *
He	Haverson silty clay *
Hh	Heldt silty clay loam, (0-2% slopes)*
Hk	Heldt silty clay loam, (2-4% slopes)*
Ho	Hesper silty clay loam, (2-4% slopes)*
Md	McRae silt loam, (2-4% slopes)*
Rm	Remmit fine sandy loam, (2-4% slopes)*
Tm	Thurlow silty clay loam, (2-4% slopes)*
Vo	Vona fine sandy loam, (2-4% slopes)*
Fe	Farland silt loam, (4-8% slopes)
Fs	Fort Collins silt loam, (4-8% slopes)
Hm	Heldt silty clay loam, (4-8% slopes)
Hp	Hesper silty clay loam, (4-8% slopes)
Ke	Keiser silty clay loam, (2-4% slopes)
Kf	Keiser silty clay loam, (4-8% slopes)
Me	McRae silt loam, (4-8% slopes)
Re	Relan loam, (4-8% slopes)
Rn	Remmit fine sandy loam, (4-8% slopes)
To	Thurlow silty clay loam, (4-8% slopes)
Vr	Vona-Remmit fine sandy loam, (4-8% slopes)

3. Climate

The climate of the Broadus area is considered "continental" and is characterized by the invasion of Pacific Ocean and Arctic air masses that result in large fluctuations in temperature and precipitation during the year. The Broadus area is semi-arid with annual precipitation amounts totaling about 34.3 cm (13.5 inches). Most precipitation falls between the months of April and September.

Summers are characterized by warm and sometimes hot 35 °C (95° F) weather. Daytime temperatures in the summer typically range from 21° to 32 °C (70° to 90° F) and scattered afternoon thunderstorms are common. Winters are generally cold in the Broadus area with January being the coldest month. The average maximum temperature during January is about -0.4° C (31.2° F) and the average minimum temperature during the month is -14.8° C (5.3° F) (Western Regional Climate Center, 2000). Low temperatures during the winter may drop to more than -34° C (-30° F) for extended periods. A number of times each winter, "chinooks" occur bringing sharp temperature increases and mild southwest to west winds to the area.

4. Water Resources and Quality

Surface Water Resources/Stream Crossings. The project area has an extensive surface drainage network characteristic of plains and foothills topography. Drainages may be found flowing in all directions; however, major streams generally flow in a north to northeast direction and are tributaries to the Yellowstone River. Numerous small drainages and intermittent streams cross the Epsie NHS Corridor. Drainages crossed by U.S. Highway 212 and Montana Highway 59 are discussed below for each project and major streams are shown on **FIGURE 7**.

> **Epsie-East & West.** The project area contains twenty-two drainages with intermittent streams. All but four of the drainages are less that 4 square km (1.5 square miles) in size. The largest drainages are Titus Creek (about 5.2 square km, 2 square miles), Two Tree Creek (about 49.2 square km, 19 square miles), Mizpah Creek (about 62.2 square km, 24 square miles) and Pumpkin Creek (about 173.5 square km, 67 square miles). Pipes beneath the existing highway are used at all stream crossings within the project area.
>
> **Epsie-East.** The project area contains fifteen drainages with intermittent streams. Only two of the drainages within the project area exceed 4 square km (1.5 square miles) including the East Fork Wolf Creek (about 31 square km, 12 square miles) and the West Fork Wolf Creek (about 28.5 square km, 11 square miles). All stream crossings within the project area are accommodated with pipes.
>
> **Broadus-East.** The project area contains between more than seventeen small intermittent streams with drainage areas less than 8 square km (3 square miles) in size. Pipes beneath the highway accommodate all of these minor drainages. The existing highway crosses four major streams in the rural portion of the project including the Powder River, Cottonwood Creek (in Broadus), the Little Powder River, and the East Fork Little Powder River. The Powder River, Cottonwood Creek, and Little Powder River crossings are spanned by bridges and a pipe is used at the East Fork Powder River crossing.

Surface Water Quality. The MDEQ considers surface waters in major streams and their tributaries in the project area to be "C-3" Class waters. Such waters are suitable for bathing, swimming, and recreation; growth and propagation of non-salmonid fishes and associated aquatic life, waterfowl, and furbearers. The quality of C-3 waters is naturally marginal for drinking, culinary and food processing purposes, and agricultural and industrial water supplies.

The MDEQ has the responsibility under *Section 401* of the federal *Clean Water Act* (**33 U.S.C. 1251 – 1376**) and the *Montana Water Quality Act* (**75-5-101 M.C.A.**, *et seq.*) to monitor and assess the quality of Montana surface waters and to identify impaired or threatened stream segments and lakes. The MDEQ sets limits, known as Total Maximum Daily (TMDLs), for each pollutant entering a body of water. TMDLs are established for streams or lakes that fail to meet certain standards for water quality and describe the amount of each pollutant a waterbody can receive without violating water quality standards. The legislatively mandated TMDL process determines the concentration of pollutants in waterbodies and stipulates controls needed to improve water quality in order to support designated uses.

The MDEQ has identified waterbodies (i.e., streams or lakes) that do not fully meet water quality standards and support the appropriate beneficial uses or are fully supporting their uses as stipulated in the standards but are threatened. Such streams or lakes are referred to as "water quality limited" and are in need of TMDL development.

The Powder River, Little Powder River, and Mizpah Creek were identified as "impaired waters" by the MDEQ according to the 1996 *303(d)* List of *Waterbodies In Need of TMDL Development.* These streams were all listed as low priorities for the development of TMDLs. The MDEQ cited flow alterations, nutrients, organic enrichment, suspended solids, salinity, metals, and siltation as parameters of concern for these waters. The MDEQ listed irrigated crop production, streambank modification/destabilization, agriculture, rangeland, and natural sources as potential sources of these water quality impairments.

The MDEQ released its *Final 2000 Waterbodies in Need of Total Maximum Daily Load Development* list in November 2000. Amendments to Montana water quality law during 1997 resulted in major differences between previous impaired waters lists and the 2000 *303(d)* List. Among other things, the amendments directed MDEQ to revise the *303 (d)* list by removing any water body that lacks sufficient credible data to support its listing. The MDEQ concluded that sufficient credible data to reach valid use support determinations is lacking for the Powder River, Little Powder River, and Mizpah Creek. Consequently, these streams are not included on the Montana 2000 *303(d)* List. In accordance with the 1997 amendments to state law, these waters have been targeted for reassessment as soon as practicable to determine if there is sufficient evidence to determine conclusively if water quality impairments exist in these streams.

Floodplains. **Executive Order No. 11988** and FHWA's floodplain regulations (23 CFR 650, Subpart A) require that the effects of the proposed action be evaluated to determine if any of its alternatives encroach on the "base" floodplain. The "base" floodplain is the area covered by water from the 100-year flood. The 100-year flood represents a flood event that has a 1% chance of being equaled or exceeded in any given year.

No delineated floodplains exist within either the Epsie East & West or Epsie-East project areas. However, portions of the Town of Broadus (Park Street and one block of Holt Avenue) are located in a delineated floodplain. Flood Insurance Rate Map (FIRM) #300058 0001C (effective date March 18, 1986) describes the 100-year floodplain of Cottonwood Creek by approximate methods. Powder River County regulates activities within this designated floodplain for the FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA).

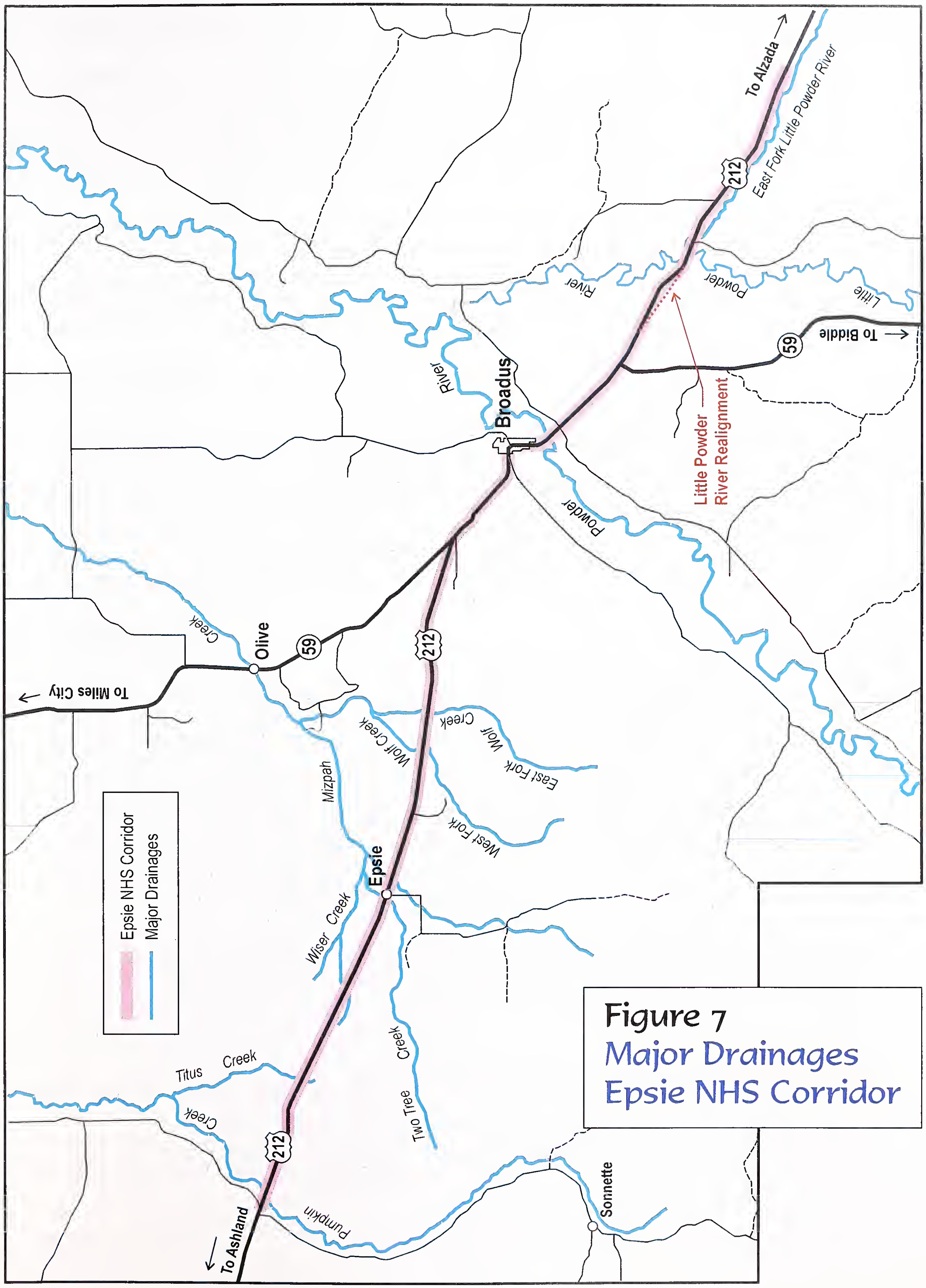


Figure 7
Major Drainages
Epsie NHS Corridor

Ground Water. The occurrence, movement, and quality of groundwater in the project area are closely tied to the surrounding geological conditions. The sandstone layers of the Fox Hills, Hell Creek, and Fort Union formations, and to a lesser extent, the alluvium found along streams are the principal sources of groundwater for domestic use and stock watering. The domestically used groundwater from these formations is typically of fair to poor quality.

The water supply in the Town of Broadus is obtained from several wells, which range in depths from 180 m to more than 335 m (590 feet to more than 1,100 feet). Domestic wells in rural portions of the Epsie NHS Corridor typically range in depth from 15 to 55 m (50 to 180 feet). Wells used for stock watering are often shallower than 15 m (50 feet), particularly in the vicinity of the Powder and Little Powder Rivers. (GWIC - http://mbmggwic.mtech.edu/)

5. Air Quality

Air quality within the project area can be described as good. No violations of state or federal air quality standards are known. The proposed action is located in an unclassifiable/attainment area of Montana for air quality under 40 CFR 81.327, as amended. Due to the relatively low traffic volumes and rural nature of the project area, extremely low carbon monoxide levels would be expected. Short-term and localized areas of air quality pollution may occur during the year because of dust generated by traffic on unpaved roads adjoining the Epsie NHS Corridor, agricultural activities, and from occasional outside burning.

6. Vegetation

General. The upland vegetation communities found in the Epsie NHS Corridor include grassland/shrubland, ponderosa pine forest, cottonwood riparian forest, and cropland. Grassland/shrubland is the predominant community, consisting of mixed grasses, sagebrush, and various forbs. This community is made up of species such as needle and thread grass (*Stipa comata*), western wheatgrass (*Elymus [Agropyron] smithii*), blue gramma (*Bouteloua gracilis*), junegrass (*Koeleria pyramidata),* big sagebrush (*Artemesia tridentata*), fringed sage (*Artemesia frigida*), dragon sagewort (*Artemesia dracunculus*), and scarlet gaura (*Gaura coccinea*). Smooth brome (*Bromus inermis*) is a common species within the highway right-of-way. Grassland communities are used primarily for grazing and dryland hay.

Ponderosa pine forest occurs in the western portion of the Epsie-East project area typically along the tops and slopes of hills with exposed rock. Ponderosa pine (*Pinus ponderosa*) is generally widespread, with primarily grasses, such as blue bunch wheatgrass (*Agropyron spicatum*), in the understory.

Cottonwood riparian communities are found along the major waterways, i.e. Powder River, Little Powder River, and East Fork Little Powder River. These communities generally consist of mature, widespread cottonwoods with grasses and forbs in the understory. While these areas support cottonwood trees, the frequency and duration of flooding is not such to create or support wetlands except as fringes along the rivers.

Some areas of cropland occur adjacent to the right-of-way, particularly in the eastern portion of the Broadus-East project area. Crops include grain, hay, and livestock forage. Both surface and groundwater is used for irrigation.

Threatened or Endangered Plants. The U.S. FISH AND WILDLIFE SERVICE (USFWS) lists water howellia and Ute ladies'-tress orchid as threatened plant species in Montana under the *ENDANGERED SPECIES ACT* (**16 U.S.C. 1531-1543**). The USFWS indicated in correspondence in May 2000 that these plant species do not occur in the project area.

Rare or Sensitive Plants. The MONTANA NATURAL HERITAGE PROGRAM (MNHP) was contacted for information on the occurrence of rare or sensitive plants in the project area. According to the MNHP, five rare and sensitive plant species, Barr's milkvetch (*Astragalus barrii*), pregnant sedge (*Carex gravida var. gravida*), New Jersey tea (*Ceanothus herbaceus var. pubescens*), little Indian breadroot (*Psoralea hypogaea*), Scribner's panic grass (*Dichanthelium oligosanthes var. scribnerianum*), occur in Powder River County, however none are known to occur in the project area. Barr's milkvetch (*Astragalus barrii*) occurs west of the project area in the Custer National Forest on eroding hillsides in silty-clay soils, and associated with rabbitbrush and snakeweed. This habitat does not extend into the project area. The other plants do not occur near the Epsie NHS Corridor.

Invasive/Noxious Plants. Both the federal and state governments have regulations concerning noxious weeds. Executive Order No. 13112 *Invasive Species*, signed in February 1999, requires federal agencies (e.g., FHWA) whose actions may affect the status of invasive species to prevent the introduction of invasive species, detect and control populations of such species, monitor invasive species populations, and restore native species and habitats that have been invaded to the extent practical and permitted by law. At the state level, Montana assigns responsibility for noxious weed control to each county.

The Powder River Weed and Pest Board reports that spotted knapweed and leafy spurge are found in the project area. Leafy spurge and Canada thistle, both Category 1 noxious weeds, are known to occur in the project area. Category 1 noxious weeds are weeds that are currently established and generally widespread in many counties of the state. Management criteria includes awareness and education, containment, and suppression of existing infestations and prevention of new infestations. These weeds are capable of rapid spread and render land unfit or greatly limit beneficial uses.

Leafy spurge was a common understory species in the cottonwood riparian community along the Powder River. According to the Powder River Extension Office, the Montana Department of Fish, Wildlife, and Parks and Powder River County have been using a biological control method in an attempt to control leafy spurge along the Powder River.

7. Wetlands

Wetlands in the project area were delineated during May 2000 by a biological resources consultant. Project area wetlands were delineated according to criteria and methods outlined in the U.S. ARMY CORPS OF ENGINEERS (COE) *1987 Wetlands Delineation Manual* (Environmental Laboratory 1987). The manual determines the presence of jurisdictional wetlands based on observations of vegetation, soils, and hydrology. Wetland location maps, found plant species lists, and COE Routine Wetland Determination forms were completed for wetland sites identified within the corridor. Additionally, MDT Field Evaluation forms were completed to assess the many functions and values attributable to wetlands. These materials may be found in the Wetlands Finding section and Appendices of the Final Biological Resources Report prepared for MDT by a consultant in December 2000.

The wetlands evaluation was conducted for all wetlands in the preliminary right-of-way corridor for the proposed highway improvement projects. The "preliminary right-of-way corridor" consisted of MDT's currently proposed alignment for the Epsie NHS Corridor projects including the Powder River Realignment east of Broadus. The existing alignment of U.S. Highway 212 in the vicinity Powder River Realignment was also evaluated based on the assumption that project-related activities could also occur there.

Wetlands in the project area fall into four basic categories: 1) fringe wetlands associated with the major waterways in the project area, i.e., the Powder River, the Little Powder River, and East Fork Little Powder River, 2) the channel and fringes along Pumpkin Creek and its tributaries, 3) a wetland complex near the US 212/US 59 junction that includes a large pond and inlet and outlet channels, portions of which fall within the right-of-way, and 4) wetlands in minor ephemeral drainages with upstream water sources (typically stock ponds).

A total of twenty-five sites in the proposed right-of-way were investigated with seventeen sites meeting the criteria for a wetland. Overall, 0.34 ha (0.83± acres) of wetlands were delineated at the seventeen identified wetland sites within the Epsie NHS Corridor. Existing wetland sites are shown in **FIGURE 8**. The majority of the wetlands in the project area are rated Category III, with some sites rated as Category IV according to MDT's Wetland Assessment Method. Category III wetlands are typically quite common, and less diverse, smaller, and more isolated than wetlands in a higher rated category (i.e., I or II). They can provide many functions and values, but are not primary habitat for a federally-listed threatened or endangered species, are not unique or rare, or not assigned high rating for the other functions and values assessed.

In the project area, the Category III wetlands are found along the fringes of the Powder River, Little Powder River, and East Fork Little Powder River; within or along the Pumpkin Creek channel and tributary; near the wetland complex west of the US212/US 59 junction; and at a site near the east end of the Broadus-East project. These areas provide important habitat in the project area, as evidenced during the May site visit by having the most wildlife observations made in these areas. The Category IV wetlands are generally small, isolated, and lack vegetative diversity. The Category IV wetlands in the project area are generally small, isolated, lack diversity, or are saline with sparse vegetation.

8. Fish and Wildlife Resources

Fisheries. The Epsie NHS Corridor crosses many drainages, however, most are intermittent and therefore have no fisheries. In the project area, the most significant water bodies for fisheries are the Powder River and the Little Powder River. Pumpkin Creek, Mizpah Creek, and the East and West Forks of Wolf Creek are crossed by U.S. Highway 212 and may support fish downstream from the project area.

The Powder River in the project area is managed by the MDFWP as a warm/cool water fishery. Warm water species such as channel catfish, longnose dace, sturgeon chub are common; cool water trout species including brook trout, brown trout, and rainbow trout also occur in the reach of the Powder River near the project area. Other species present in this reach include common carp, flathead chub, plains minnow, river carpsucker, and shovelnose sturgeon. Most of these species are year-round residents, and several spawn in the reach that includes the project area, including rainbow trout, brown trout, and channel catfish. The fisheries resource value for the reach of the Powder River that includes the project area is rated "high" by MDFWP. Dewatering within this reach of the Powder River is a concern to MDFWP's fisheries biologists because the stream supports or contributes to important fisheries.

The Little Powder River within the Epsie NHS Corridor is managed by the MDFWP as a non-trout stream. Common fish species in this part of the Little Powder River include channel catfish, goldeye, river carpsucker, shorthead redhorse, western silvery/plains minnow. Other species that occur include common carp, flathead chub, green sunfish, stonecat, and white sucker. Most of these species are year round residents. The fisheries resource value for the Little Powder River in the project area is considered “substantial" by MDFWP.

Wildlife Resources. According to MDT's Biological Resources Report, the variety of habitats in the Epsie NHS Corridor area support an abundant and diverse population of wildlife species. The project area provides year-round habitat for big game species such as white-tailed and mule deer, and pronghorn antelope. Habitat for fur-bearing mammals like the North American badger, bobcat, long-tailed weasel, mink, red fox, coyote, raccoon, striped skunk, muskrat, and North American beaver exists in the project corridor and these species may be found there. A variety of other small mammals (mice, shrews, voles, bats, rabbits, chipmunks and squirrels, gophers, and porcupines) are also likely to occur in the general project area.

According to P.D. Skaar's *Montana Bird Distribution,* 184 species have been recorded in the latilong (a block of land one degree latitude by one degree longitude) in which the highway reconstruction projects occur. Notable among these are a large number of songbirds, various game birds, and raptors. Nests of Brewer's blackbirds, mourning dove, and meadowlark were found in the proposed highway right-of-way. Cliff swallows were found nesting in the East Fork Little Powder River culvert and under the Powder River bridge. Several raptor nests were noted along the highway, particularly in the cottonwood riparian community, and in scattered trees and rock outcrops in the western portion of the highway corridor.

Amphibians that could be found in the project area include the tiger salamander, Great Plains and Woodhouse's toad, Western chorus and Northern leopard frogs. Reptiles known to occur in eastern Montana and that could be found in the project area include several species of lizards, turtles, blue racer, Western hognose snake, milk snake, gopher snake, Western rattlesnake, and garter snakes.

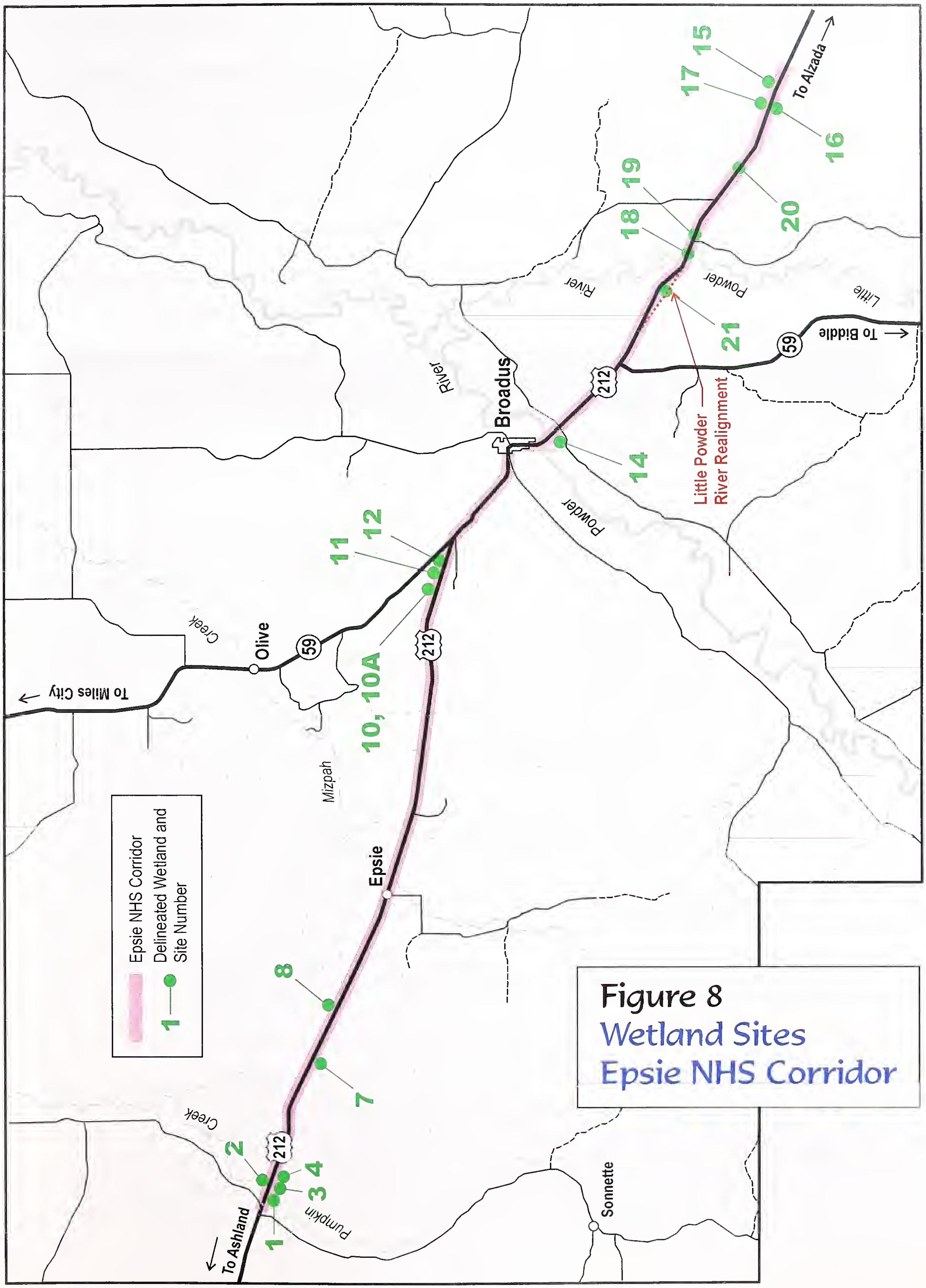


Figure 8
Wetland Sites
Epsie NHS Corridor

Threatened, Endangered, and Sensitive Wildlife. In accordance with *Section 7(a)* of the *ENDANGERED SPECIES ACT* (**16 U.S.C. 1531-1543**), MDT contacted the USFWS for a list of endangered, threatened, proposed, and candidate species that could occur in the project area. MDT consulting biologists also assessed whether or not any of the Federally-listed threatened or endangered (T/E) species or important habitat for the species occur in the project area. MDT concluded the following T/E species could occur in the Epsie NHS Corridor. The species and other pertinent information about habitats and is presented in **TABLE 4**.

Table 4: Species, Habitat, and Potential Occurrence of T/E Species in the Epsie NHS Corridor Project Area

Species Federal Status	Important Habitat	Potential Occurrence
Black-footed Ferret *(Mustela nigripes)* Endangered	Prairie dog colonies	Only known occurrence in Montana is reintroduced population at C.M. Russell Wildlife Refuge approximately 265 km (165 miles) north of project area
Whooping Crane *(Grus Americana)* Endangered	Wetlands, crop land, open riverine channel	Rare migrant in eastern Montana, primarily found near Fort Peck dam approximately 280 km (175 miles) north of project area
Bald Eagle *(Haliaeetus leucocephalus)* Threatened	Coniferous forest, cottonwood riparian, aquatic areas	Primarily winter resident, but could occur year-round, one individual observed in project area January 20, 2000
Mountain Plover *(Charadrius montanus)* Proposed Threatened	Shortgrass prairie, flat topography	Not known to occur in the project latilong, habitat marginal
Sturgeon Chub *(Macrhybopsis gelida)* Candidate	Riffle habitat over sand, gravel, small rubble in large turbid rivers	Found in Powder River and possibly Little Powder River
Swift Fox *(Vulpes velox)* Candidate	Eastern great plains grasslands	No records from the project area but habitat appears suitable
Black-tailed Prairie Dog *(Cynomys ludovicianus)* Candidate	Shortgrass and mixed grass prairie	Not known to occur in the project latilong, none observed in vicinity during two site visits

Rare and Sensitive Wildlife. The MNHP was contacted for information on the occurrence of wildlife species in the project area listed by the agency as rare, unique to a region of the state, threatened, or endangered throughout their range in Montana, vulnerable to extinction in Montana, or in need of further research. Rare and sensitive species are typically not protected as threatened or endangered under the federal *ENDANGERED SPECIES ACT*. The following rare and sensitive wildlife species could occur in the Epsie NHS Corridor.

Mammals. Although distribution information is limited for rare and sensitive mammals, The following species could occur based on habitat and historic records: Merriam's shrew, black- tailed jackrabbit, Hispid pocket mouse, and meadow jumping mouse. The Merriam's shrew, black-tailed jackrabbit, and Hispid pocket mouse could be found in grassland/shrubland habitat and the meadow jumping mouse in the riparian areas.

Birds. Based on historical distribution records, the black tern, Baird's sparrow, dickcissel, andCassin's kingbird could be found in the project area. These species breed in Montana, and occur in the state between mid-May and mid-October. The Baird's sparrow, dickcissel, and Cassin's kingbird are likely to be found in grassland/shrubland habitat but the project area is at the periphery of the range of each of these species. The black tern is most likely to be found in marshy areas.

Amphibians. One rare and sensitive amphibian, the northern leopard frog, occurs in the project area. This species was found in a wetland site in the project area during a site visit. Historically, it was widespread throughout the state, but is now apparently extinct over nearly all of western Montana.

Reptiles. The project area contains habitat for the snapping turtle, western hognose snake, and milk snake. The snapping turtle, if present, would be found along the Powder River or Little Powder River and the two snakes could be found in arid locations.

C. Human Environment

1. Land Ownership and Use

Land Ownership. The lands within the Epsie NHS Corridor project area are primarily under private ownership. However, federal land managed by the U.S. DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT (BLM) and state land managed by the DEPARTMENT OF NATURAL RESOURCES AND CONSERVATION (DNRC) are crossed by U.S. Highway 212. The legal descriptions of these federal and state lands are listed below:

Section 34; Township-3-South; Range-48-East, M.P.M. -- (BLM)
Section 6; Township-4-South; Range-49-East, M.P.M. -- (BLM)
Section 36; Township-3-South; Range-48-East, M.P.M. -- (DNRC)
Section 36; Township-5-South; Range-52-East, M.P.M. -- (DNRC)

MDT's Epsie East & West project on U.S. Highway 212 begins about 3.7 km (2.3 miles) east of federal lands within the Custer National Forest. **FIGURE 3** in Part I shows federal, state, and private lands in the Epsie NHS Corridor.

Existing Land Uses. The majority of the Epsie NHS Corridor passes through rural lands used primarily for grazing livestock with some dryland farming. U.S. Highway 212 and Highway 59 provides access to scattered residences and farms situated in the general vicinity of the roadway. The highway corridor also passes directly through the Town of Broadus and serves as one of the community's main streets. Highway commercial, commercial, and residential development exists along the roadway within Broadus with the density of such development decreasing as the distance away from town increases.

Applicable Land Use Plans. Powder River County has adopted a Comprehensive Plan to guide land use and development on all lands in the county. The Plan was adopted by the County in 1981 and was updated most recently in 1994. The Powder River County Commissioners and the County Planning Board are the responsible entities for implementing the comprehensive plan.

The BLM and DNRC are responsible for managing land uses and activities on federal and state lands in the Epsie NHS Corridor.

2. Social and Economic Conditions

The Epsie NHS Corridor project area is located in rural portions of Powder River County and the Town of Broadus. According to the an early release of information from the U.S. Census Bureau, the population of the Town of Broadus was estimated to be about 451 and Powder River County's population was estimated to be 1,858 as of the date of the 2000 Census (U.S. Census Bureau, March 21, 2001data release (http://ceic.commerce.state.mt.us/C2000/PL2000/index.htm). This information suggests that since 1990, the populations of Powder River County and the Town of Broadus have declined by some 11% and 21%, respectively. Since 1980, the County's population has declined by more than 26% and the populations of the Town of Broadus has declined by nearly 37%. Projections of population obtained from the MONTANA DEPARTMENT OF COMMERCE (MDOC) Census and Economic Information Center suggest the County's total population may decrease to about 1,750 residents by the year 2010. (NPA Data Services, Inc., October 2000, MDOC data release, http://ceic.commerce.state.mt.us/Demog/project/npa99mt.htm).

Population and Economic Characteristics. Detailed population and socio-economic data for residents of Powder River County is periodically collected and distributed by the U.S. BUREAU OF THE CENSUS and the Montana Census and Economic Information Center of the MDOC. Based on data from these sources, the following characteristics are evident for county residents:

- Minorities are estimated to comprise about 2.5% of the County's population in 1999.
- About 21.9% of the County's residents were estimated to be over the age of 65 in 1999.
- The 1997median household income was estimated to be $29,283.
- The estimated per capita personal income for County residents was $16,314 in 1998. The County ranked 41st out of the State's 56 counties for this income category.
- An estimated 15.3% of all County residents lived below the poverty line in 1997.
- The average household size was 2.55 persons in 1990.

Other Social Conditions. School age children in the Epsie NHS Corridor attend schools in Broadus. The community has an elementary school for grades K-6, a middle school for grades 7-8, and the district high school for students in grades 9 through 12. Children residing in rural areas near Broadus are transported via U.S. Highway 212 and Highway 59 by bus or private vehicles to attend these schools.

Postal service is provided to residents within the Epsie NHS Corridor project area by the Post Office located in Broadus. Emergency police, ambulance, and fire services are also dispatched from Broadus.

Economy of the Project Area. The economy of Powder River County is based on growing dryland and irrigated crops, raising livestock, and agricultural support services. Farms and ranches in the county primarily produce grain (winter wheat, spring wheat, oats and barley), hay, and livestock (cattle and sheep). According to the 1997 Census of Agriculture, the number of farms in the County decreased from more than 350 in 1987 to about 297 farms in 1997. Over the same period, the average size of farms has increased by about 10%. This trend toward consolidation of smaller farms and ranches is expected to continue over the foreseeable future.

Although agriculture is a major industry in the County, non-farm industries (services, retail trade, state and local government, etc.) actually comprise the largest industrial sector in the County's economy. Of the estimated 1,184 jobs in the County in 1997, non-farm industries accounted for about 70% of the total employment (Regional Economic Information System (REIS) for Powder River County, U.S. Bureau of Economic Analysis, 1997).

Broadus is the seat of government and the economic center of Powder River County. The community provides the principal place of residence for nearly one-third of the County's population and is the only place where many goods and services can be purchased locally.

3. Rights-of-Way and Utilities

The existing rights-of-way for U.S. Highway 212 and Highway 59 vary substantially in width throughout the Epsie NHS Corridor. The existing right-of-way is summarized for each highway reconstruction project below.

> **Epsie-East & West.** The existing right-of-way varies in width from 16.8 m to 61.0 m (55.0± feet to 200.0± feet) on each side of the U.S. Highway 212 centerline. In most locations within the project area the width exceeds 21.3 m (70.0± feet) on each side of the roadway centerline.
>
> **Epsie-East.** The existing right-of-way for U.S. Highway 212 ranges in width from 21.3 m to 30.5 m (70.0± feet to 100.0± feet) on each side of the roadway centerline. Most of the existing right-of-way is 24.4 m (80.0± feet) on each side of the road's centerline.
>
> **Broadus-East.** The existing right-of-way within this project area ranges in width from 12.2 m to 45.7 m (40.0± feet to 150.0± feet) on each side of the highway centerline, with the majority being 24.4 m (80.0± feet) or greater.

Overhead power lines, underground telephone cables, and buried fiber optics line exist adjacent to the roadway throughout the Epsie NHS Corridor. These utilities may be in conflict with the proposed highway reconstruction at various locations. MDT conducted a Subsurface Utility Engineering (SUE) investigation for the Broadus-East project to determine the exact locations and depths to oil lines, natural gas lines, television and communication lines, and municipal water and sewer lines. The SUE investigation identified numerous instances within the Broadus community where the proposed reconstruction would conflict with existing underground utilities.

None of the Epsie NHS Corridor projects would affect railroads or associated facilities.

4. Noise

Noise-Sensitive Receptors. Noise levels associated with traffic are often a concern at land uses along highways where highway traffic noise may affect frequent human activities. Noise-sensitive land uses in the vicinity of highways have been categorized according to the Noise Abatement Criteria (NAC) listed in 23 CFR 772. The NAC are a set of guidelines established by the FHWA to help determine when traffic noise is no longer compatible with uses of adjacent lands. Maximum exterior (and sometimes interior) noise levels are specified for each NAC Activity Category.

Noise sensitive land uses within the Epsie NHS Corridor consist of residences adjacent to the highway and the picnic and recreation area associated with a community park in Broadus. These land uses fall within Activity Category B according to the NAC. Commercial establishments and other developed uses in the corridor are Activity Category C and undeveloped rural lands are in Activity Category D according to the NAC.

Existing Noise Levels. MDT did not perform a detailed noise analysis for the Epsie NHS Corridor projects because the proposed projects would not increase the number of through traffic lanes, halve the horizontal distance between the highway centerline and noise receivers, or change the profile of the road by 6 m (20 ft) or more.

The most noise-sensitive adjacent land uses (residences) in the corridor are listed under Activity Category B according the NAC and are located in the immediate Broadus area. The generally established maximum exterior noise level for such uses is 67 dBA Leq(h). The term dBA Leq(h) refers to equivalent hourly noise level (in decibels on the A-weighted scale). Undeveloped rural lands are considered to be in Activity Category D and the NAC does not specify an associated maximum noise level for this category.

Although MDT did not measure existing traffic noise levels, it is reasonable to conclude that existing noise levels are well below the NAC maximum exterior noise levels at sensitive locations in the project area. This assumption can be made based on the relatively low traffic volumes and travel speeds on the highway in the Broadus community.

5. Hazardous Materials/Substances

Hazardous materials are products or wastes regulated by the U.S. Environmental Protection Agency (EPA) or the Montana Department of Environmental Quality (MDEQ). These include substances regulated under the *COMPREHENSIVE EMERGENCY RESPONSE, COMPENSATION, AND LIABILITY ACT* (CERCLA or Superfund), the *RESOURCE CONSERVATION AND RECOVERY ACT*

(RCRA), and regulations for solid waste management, above-ground storage tanks (ASTs) and underground storage tanks (USTs).

No National Priority List (NPL) or Superfund sites identified by the EPA are located in or near the Epsie NHS Corridor. The EPA's current (4-19-00) list of the RCRA regulated treatment, storage, and disposal facilities and hazardous waste generators were reviewed to determine if any such facilities exist in the project area. The only EPA-listed handler of hazardous waste in the Broadus area is Powder River County High School (a conditionally-exempt small quantity generator) located outside the Epsie NHS Corridor.

MDT reviewed the project area for potential sources of hazardous waste and examined MDEQ's statewide database of all known UST registered with the agency to identify tank locations within the Epsie NHS Corridor. Information contained in MDEQ's database lists tank ownership, contents, age, size, construction and release detection method installed and includes data on all UST systems whether active, closed in-place or removed. **TABLE 5** identifies registered UST facilities within the project corridor.

Table 5: Underground Storage Tank (UST) Facilities in the Epsie NHS Corridor

Facility ID	Facility Name	Street Address	ActiveTanks	Non-activeTanks
38-03951	Alderman Oil Company	601 S Park	6	3
38-11828	Broadus Boot And Tack	210 Holt		1
38-02464	Broadus Truck & Supply	201 E Holt		3
38-07211	Chuck's Tastee Freeze	308 W Holt Box 197		1
38-11841	Copps True Value Inc	W Of Broadus		5
38-00548	County Shop - Maintenance Yard	1.6 km (1 Mi) E Broadus On US Highwy 212	1	2
38-13441	Epsie Store - Abandoned	US Highway 212		2
38-00126	Farmers Union Oil Co	106 W Holt	4	5
38-03413	H. J. Miller	202 Park Ave		4
38-12088	J. McDowell	1.6 km (1 Mi) W Broadus On Hwy # 59		1
38-09682	MDT (Broadus Section Yard)	US 212 (RP 79.3)		5
38-05046	Park Super Service	322 S Park Ave	6	
38-07297	Pic Ranches Inc	1.6 km (1 Mi) N Of Broadus		1
38-03950	Potwine Plumbing	221 S Park		1
38-05047	R. Mccurdy & R. Shamley	102 S Park Ave		4

Source: Montana Department of Environmental Quality, Remediation Division-Technical Services Bureau Environmental Services Section, Underground Storage Tank - Leak Prevention Program, "Montana Underground Storage Tank Facilities Database," dated August 15, 2000.

The Petroleum Release Section of the MDEQ administers the federal Leaking Underground Storage Tank (LUST) Trust Fund Program that conducts investigation and remediation activities at release sites that threaten human health and the environment. The Petroleum Release Section maintains a statewide database of all storage tank releases that have been reported since 1986. **TABLE 6** shows facilities within the Epsie NHS Corridor included on the MDEQ's database of LUST sites.

Table 6: Leaking Underground Storage Tank (LUST) Facilities Epsie NHS Corridor

MDEQ ID#	Project Area	Name/Description	Status/Comments
38-13441	Epsie-East &West	Abandoned gas station	Tanks Removed, testing shows no site contamination down gradient
38-02464	Broadus-East	Broadus Truck & Supply 201 E Holt	Confirmed Release Date 7/18/90 Gasoline
38-11841431 38-11841654	Broadus-East	Copps True Value W of Broadus	Confirmed Release Dates 2/12/90 and 3/16/91 -- Diesel/Gasoline
38-00126	Broadus-East	Farmers Union Oil 106 W Holt	Confirmed Release Dates 9/12/89 and 11/30/92 -- Gasoline
38-03413	Broadus-East	H.J. Miller 202 Park Ave	Confirmed Release Date 7/17/90 Gasoline
38-09682	Broadus-East	MDT Section Yard US 212 (RP 79.3)	Confirmed Release Date 10/01/91 Various materials
38-05047	Broadus-East	R. McCurdy & R. Shamley 102 S Park	Confirmed Release Date 7/16/90 Gasoline
38-00548	Broadus-East	County Shop Maintenance Yard 1.6 km (1 mi) E US 212	Confirmed Release Dates 10/22/90, 11/10/93, 4/10/96 Gasoline
38-07211	Broadus-East	Chucks Tastee Freeze 308 W Holt	Confirmed Release Date 9/16/92
38-03951	Broadus-East	Alderman Oil Company 601 S Park	Confirmed Release Date 7/10/98

Source: Montana Department of Environmental Quality, Remediation Division-Technical Services Bureau Environmental Services Section, Underground Storage Tank - Leak Prevention Program, "Montana Leaking Underground Storage Tank Facilities Database," dated August 15, 2000.

6. Recreational Opportunities and Resources

Recreational opportunities in the Epsie NHS Corridor center around dispersed activities. Lands in the Broadus area support big game animals like mule deer, whitetail deer, antelope, and elk and many types of upland game birds and waterfowl. Fishing opportunities for rainbow trout, catfish, bluegill, northern pike, and bass also exist in Powder River County. Dispersed recreation like hiking, cross-country skiing, snowmobiling, berry picking, and camping are available on Custer National Forest lands west of the Epsie NHS Corridor.

The Town of Broadus offers several notable developed recreation sites. A roadside park and the local fairgrounds exist west of U.S. Highway 212 and Highway 59 at the south edge of the community. Powder River Golf Course is located near the junction of U.S. Highway 212 and Highway 59 northwest of the community.

7. Pedestrian and Bicycle Facilities

Although counts are not available to quantify such use, the Epsie NHS Corridor receives only limited use by pedestrians and bicyclists. Most pedestrian and bicyclist activity would be expected to occur within the Town of Broadus. Bicyclists on U.S. Highway 212 and Highway 59 must travel on the existing road's paved shoulder that ranges from 0.3 m (1 foot) or less to 0.6 m (2 feet) wide or use vehicle travel lanes for riding through rural portions of the project area. Pedestrians must also use the shoulder or roadside slopes for walking along the highway in rural areas of the roadway corridor.

An existing walkway/bike path is located west of Broadus on the south side of U.S. Highway 212 and Highway 59. The facility begins approximately 1 km (0.6 miles) west of the intersection of Park Avenue and Holt Street and extends to a point about 0.4 km (0.25 miles) west of town. Wider shoulders and sidewalks also exist within the Town of Broadus.

8. Visual Resources

The natural features of the Epsie NHS Corridor can be characterized as rolling short-grass prairie with occasional isolated ridges and rocky outcrops. Many uplands in the corridor are covered with stands of Ponderosa pine and Rocky Mountain juniper. Lands adjacent to the highway are covered with common grasses, sagebrush, prickly pear, and saltbush. Riparian corridors are notable due to the presence of thick stands of cottonwoods. The dominant man-made features in the Epsie NHS Corridor include: the existing road and its associated features; intersecting roads and streets; fencing; buildings, parking areas, and landscaping within Broadus area and at other locations along the highway; overhead utilities, a power substation, and a microwave tower; and cultivated agricultural land.

The land area seen from the highway corridor is dominated by background landscapes (eroded uplands and isolated ridges and buttes) and foreground landscapes (the rolling hills and agricultural lands adjacent to the road, isolated stream corridors, the Powder River and Little Powder River and their associated riparian areas, and the developed lands and buildings in the Broadus community). Those who view the existing highway and who would see the reconstructed transportation facilities in the Epsie NHS Corridor include permanent residents, seasonal visitors to the area, and commercial haulers and other motorists passing through the area on U.S. Highway 212 and Highway 59.

9. Archaeological and Historical Resources

Cultural resources are protected by the *NATIONAL HISTORIC PRESERVATION ACT OF 1966*, as amended **(16 U.S.C. 470 et seq.)**. This law and its implementing regulations require the identification and evaluation of significant historical resources that a project may impact. It further requires that resources so identified be avoided, if possible, or when avoidance is not possible, that any adverse effects of the project on the resources be mitigated. Coordination is also required with the MONTANA STATE HISTORIC PRESERVATION OFFICE (SHPO) and the ADVISORY COUNCIL ON HISTORIC PRESERVATION (ACHP).

Consultants performed cultural resource surveys for the proposed Epsie NHS Corridor projects June 1998, and during August and October 1999. **TABLES 7** and **8** list previously recorded sites and newly recorded cultural sites within the Epsie NHS Corridor and presents their National Register of Historic Places (NRHP) eligibility status.

Table 7: Archaeological and Historic Sites in the Epsie-East & West and Epsie-East Project Areas

Site Number	Project Area	Name/Description	NRHP* Eligible?
24PR1793/1807	Epsie-East &West	Pumpkin Creek Site (previously recorded) Prehistoric Site	Eligible
24PR1556	Epsie-East &West	Epsie Post Office Historic Site	Not Eligible
24PR1903	Epsie-East &West	Charles Lovett Homestead Historic Site	Not Eligible
24 PR1792	Epsie-East &West	Isolated find (previously recorded) Prehistoric Site	Not Eligible
24PR1900 24PR1901 24PR1902	Epsie-East &West	Isolated finds - Prehistoric Sites	Not Eligible
24 PR1295	Epsie-East	Lithic Scatter Prehistoric Site	Not Eligible
24 PR1296	Epsie-East	Peerless Coal Mine	Not Eligible
24 PR1298	Epsie-East	Earth Dam and Stock Pond	Not Eligible
24 PR764	Epsie-East	Rock Alignment (previously recorded) Prehistoric Site	Not retested - landowner denied entry
24 PR1795	Epsie-East	Rock cairn (previously recorded) Prehistoric site	Not retested - landowner denied entry

* **NRHP** National Register of Historic Places

Table 8: Archaeological and Historic Sites in the Broadus-East Project Area

Site Number	Property Type	Site Name	NRHP* Eligible?
24 PR1944	Historic Site Residence/Garage	"Judge's Chambers" (101 South Wilbur)	Eligible
24 PR1945	Historic Site Residence	L.L.C. Amsden Property	Not Eligible
24 PR1946	Historic Site Residence	E. Lee Wilson House (209 Holt Street)	Not Eligible
24 PR1947	Historic Site Community Building	Powder River Masonic Lodge No. 135 (205 Holt Street)	Not Eligible
24 PR1948	Historic Site Commercial Building	McCurdy Laundromat	Not Eligible
24 PR1949	Historic Site Commercial Building	Ned's Antiques	Eligible
24 PR1950	Historic Site Residence/Sheds	Miller Building	Not Eligible
24 PR1951	Historic Site Garage	Garage (at Park and South Streets)	Not Eligible
24 PR1952	Historic Site Residence/Garage/Shed	Nalley Residence	Not Eligible
24 PR1953	Historic Site Residence/Garages	Webster Residence	Not Eligible
24 PR931	Timber Bridge	Cottonwood Creek	Not Eligible

* **NRHP** National Register of Historic Places

SHPO concurred with NRHP eligibility determinations for cultural sites recorded in the Epsie-East & West project area on November 20, 1998. SHPO concurred with NRHP eligibility determinations for cultural sites recorded in the Epsie-East project area on November 6, 2000 and with similar determinations for cultural sites recorded in the Broadus-East project area on February 27, 2001. Copies of letters indicating SHPO's concurrence can be found in **APPENDIX B**.

MDT conducted supplemental archaeological testing within the Pumpkin Creek Site prehistoric site (24PR1793/1807) during October 2001. The excavation of numerous shovel probes and test units failed to identify any significant cultural materials from the portion of the NRHP-eligible site that would be disturbed by the proposed Epsie-East & West project.

10. *Section 4(f)* Properties

Section 4(f) of the *U.S. DEPARTMENT OF TRANSPORTATION ACT*, as amended (**49 U.S.C. 303**), applies to Federally-funded transportation actions that affect sites on or eligible for the NRHP, publicly-owned parks, recreation lands, and wildlife and waterfowl refuges. Letters from several agencies concerning *Section 4(f)* issues are provided in **APPENDIX B**.

The proposed reconstruction of the Epsie NHS Corridor would not affect any wildlife or waterfowl refuges. However, the proposed highway reconstruction project would affect the Pumpkin Creek Site (24PR1793/1807) located at the western terminus of the Epsie-East & West project. Because the site is NRHP-eligible, a *Section 4(f)* evaluation must be completed by MDT.

Road reconstruction in the Broadus area would occur adjacent to the Powder River Golf Course (located northwest of town) and adjacent to Cottonwood Park located west of Park Avenue (U.S. Highway 212/Montana Highway 59) near the county fairgrounds. Both public recreation sites are considered significant for *Section 4(f)* purposes. However, the proposed highway improvements have been designed to avoid the need for new right-of-way from either public recreation site.

11. *Section 6(f)* Lands

Section 6(f) of the *NATIONAL LAND & WATER CONSERVATION FUND ACT* (**16 U.S.C. 460**) requires that coordination be done to determine if federal funds were used to acquire or improve any lands in the project area for recreation or water conservation purposes. The MDFWP, the agency that administers the Land and Water Conservation Fund (LWCF) in Montana, was contacted about the use of federal monies to acquire or develop recreation facilities in the Epsie NHS Corridor. Letters from the MDFWP concerning *Section 6(f)* lands and sites can be found in **APPENDIX B**.

The MDFWP indicated that the Powder River Golf Course is the only recreation site in the Epsie NHS Corridor where LWCF funds were used. LWCF Project #30-00508 provided funds to improve the to improve golf course and the facility is protected under *Section 6(f)* of the *NATIONAL LAND & WATER CONSERVATION FUND ACT*.

V. Environmental Impacts and Mitigating Measures

V. ENVIRONMENTAL IMPACTS and MITIGATING MEASURES

A review of the social, economic, and environmental factors and resources likely to be affected by the proposed reconstruction of the Epsie NHS Corridor were reviewed during the development of this Environmental Assessment. This review involved cooperation between MDT and Federal and state agencies, local governments, affected landowners, and the general public.

This Part discusses the potential impacts of implementing the Preferred Alternative and the alternative of taking no action. As indicated in Part III, the No Build Alternative is being analyzed for the purposes of providing a contrast or comparison with MDT's Preferred Alternative. Only the impacts with a reasonable possibility for individual or cumulative impacts are assessed under this section. Where appropriate, measures to mitigate the adverse environmental impacts of these projects are discussed at the end of each section. If the Preferred Alternative is advanced, then MDT will implement the mitigating measures identified in this Part.

A. Impacts to the Natural Environment

1. Topography, Geology, and Soils

Impacts of the Preferred Alternative. The proposed road improvements in the Epsie NHS Corridor would involve cutting and filling for highway widening, curve modifications, and the development of the road on new areas adjacent to the existing roadway. Widening, curve reconstruction, and shifting the roads alignment would disrupt, displace, compact, and cover soils not currently associated with the existing highway. These effects would be most notable in the area of the Little Powder River Realignment where the proposed road would follow an entirely new alignment for about 3.4 km (2.1± miles) and affect some previously undisturbed lands.

To stabilize slopes and to minimize the visual effects of new cuts and fills, slopes would be rounded and revegetated to blend with the adjoining lands. The presently traveled way (PTW) would be obliterated where it cannot be incorporated into the foundation of the new roadway. The ground would be contoured to match existing terrain in areas where the old road is obliterated.

MDT's engineers intend to design the proposed projects in a manner that "balances" the amount of cut and fill materials within each project area. This would minimize the need for borrow sources away from the project area. Surface and subsurface materials would be disturbed at locations away from the project areas if additional material were needed to build the new roadway. MDT's contractor(s) would typically provide any foundation material for the highway that must be imported to construct the proposed projects. The environmental effects associated with the highway contractor obtaining and transporting any additional material needed to build the highway cannot be assessed at this time since the origin of such materials is unknown.

No geotechnical conditions exist that would limit the development of the proposed highway reconstruction projects. However, soil samples already tested by MDT indicate that some project area soils are corrosive to zinc-coated steel and aluminum and some soils are alkali reactive to concrete. This information is important since these soil conditions would dictate the types of materials best suited to serve as drainage pipes beneath the new highway. MDT would drill test holes throughout the project corridor to determine the soil types and depths likely to be encountered by road construction. Areas of adverse soil conditions would also be identified and noted on preliminary plans so appropriate designs can be developed for the reconstructed roadway.

The construction activities, including clearing and grading, would increase the short-term and long-term potential for soil erosion and sediment transport. This potential for erosion and adverse sedimentation impacts would vary depending upon the amount of soil area disturbed, the nature of the soils disturbed, the steepness of slopes, the proximity of the disturbance to wetlands and surface waters, and the duration of the soil disturbance.

Erosion Control Plans would be designed for each proposed project and they would be submitted to the MDEQ Permitting and Compliance Division in accordance with their Montana Pollutant Discharge Elimination System Regulations (ARM 16.20.1314). Best Management Practices, including temporary and long-term erosion control measures, would be considered in the design of these Plans. Such measures may include the use of lined channels, silt fences, ditch blocks, mulch, slope protection and other commonly accepted measures. The Plans would be developed using Guidelines established in MDT's "Highway Construction Standard Erosion Control Workplan" whose main objective is to minimize erosion of disturbed areas during and after construction of these proposed projects.

In accordance with **7-22-2152** and **60-2-208, M.C.A.**, MDT would also reestablish a permanent desirable vegetation community along all areas disturbed by the proposed highway construction. A set of revegetation guidelines would be developed by MDT that must be followed by the contractor.

Cumulative Impacts. Oil, gas, and coal bed methane development is ongoing and expected to continue within the Powder River Basin over the foreseeable future. The proposed Epsie NHS Corridor improvements, combined with other ongoing and planned development activities, would not cause any notable cumulative effects on the topography, geologic conditions or soils within the project area. This conclusion was reached because highway reconstruction typically involves ground disturbances within existing transportation corridors. With the exception of necessary gravel mining or the occasional excavation of rock outcrops, road building rarely affects the underlying geologic structure of the project area.

Impacts of the No Build Alternative. The No Build Alternative would not require any significant ground disturbances within the Epsie NHS Corridor,

Mitigating Measures. The following measures would be implemented to minimize project-related effects on the topography and geologic conditions within the Epsie NHS Corridor.

- *To stabilize slopes and to minimize the visual effects of new cuts and fills, slopes would be rounded and revegetated to blend with the adjoining lands.*

- *An Erosion Control Plan employing Best Management Practices for controlling erosion and sediment transport would be implemented in each project area.*

- *The existing roadbed would be incorporated into the new road where possible.*

2. Impacts to Important Farmland

Impacts of the Preferred Alternative. The NRCS District Conservationist identified twenty-four soils crossed by U.S. Highway 212 and Highway 59 as either "Prime Farmland If Irrigated" or as "Farmland of Statewide Importance." The information provided by NRCS and preliminary right-of-way plans for the proposed improvements were reviewed to determine the area of farmland that would be affected by the Epsie NHS Corridor projects.

Of importance under the *FARMLAND PROTECTION POLICY ACT* of 1981 (*FPPA* - **7 U.S.C. 4201**, et seq.) are the areas of direct and indirect conversion of farmland. Direct conversions occur when soils meeting the definition of farmland are included in the proposed highway right-of-way. Indirect conversions of farmland occur when the areas remaining in a tract of land partially taken for right-of-way 1) would no longer be capable of being farmed due to access restrictions; or (2) would likely be converted to a non-farm use due to the accessibility of the highway. **TABLE 9** summarizes the area of farmland directly and indirectly converted by the proposed highway improvements projects.

Table 9: Total Estimated Farmland* Impacts in Epsie NHS Corridor

NHS Corridor Project	Area of Farmland Directly Converted to New R/W	Area of Farmland Indirectly Converted	Total New Area of Farmland Affected
Epsie - East & West	15.64 ha/38.65 ac	0.0 ha/0.0 ac	15.64 ha/38.65 ac
Epsie-East	13.72ha/33.88 ac	0.0 ha/0.0 ac	13.72ha/33.88 ac
Broadus - East (Includes Little Powder River Realignment)	24.79 ha/61.26 ac	0.0 ha/0.0 ac	24.79 ha/61.26 ac
Corridor Total	**54.14 ha/133.78 ac**	**0.0 ha/0.0 ac**	**54.14 ha/133.78 ac**

* Farmland includes soils designated as prime farmland, unique farmland, or farmland of statewide or local importance by the NRCS.

Based on the information presented above, the construction of the proposed projects would directly convert 54.14 ha (133.8 acres) of "Prime Farmland If Irrigated" or as "Farmland of Statewide Importance." The proposed projects would not indirectly convert any farmland in the Epsie NHS Corridor.

A Farmland Conservation Impact Rating form (#AD-1006) was processed for the proposed highway improvement projects in accordance with the *FPPA*. It should be noted that the NRCS was contacted in February 2001 to complete Parts II, IV, or V of the form; however, no response was received from the agency. MDT assumed a relative value of 100 for farmland in the corridor and assigned points for the site assessment criteria in Part VI of the form. The *Total Points* for the projects were calculated to be 152. Since this total is less than 160 points, no further consideration for protection is necessary and no additional Important Farmlands evaluations are required. The completed form was not submitted to the NRCS but a copy is provided in **APPENDIX B**.

Cumulative Impacts. The proposed Epsie NHS Corridor improvements together with the impacts of present and future development activities, such as the improvements on Montana Highway 59 between Broadus and Miles City, would continue to convert minor amounts of farmland in Powder River County (and nearby counties) to other uses. These conversions would not represent a substantial loss of important farmland in Powder River County or other counties in southeastern Montana.

Impacts of the No Build Alternative. The No Build Alternative would not convert any prime, unique or important farmland in the Epsie NHS Corridor.

3. Water Quantity and Quality Impacts

Impacts of the Preferred Alternative. Erosion and sedimentation during construction and surface runoff after construction are the principal ways that water quality could be affected by the proposed highway reconstruction projects. Unless preventative measures are taken, erosion and sedimentation and highway runoff have the potential to affect water quality and aquatic resources. Since the Powder River, Little Powder River, and Mizpah Creek are all listed as "water quality limited" by the MDEQ, it is important that impacts to these resources be minimized.

As indicated earlier, vegetation clearing and grading for the realigned highway would increase the potential for soil erosion and sediment transport. Additionally, lengthening or replacing culverts and reconstructing adjacent roadway approaches would expose soils and increase the potential for erosion. Although erosion occurs naturally to some extent, the erosion of areas disturbed by the construction could contribute additional sediments to surface waters. Increased sediment loads, particularly for a long duration, may alter downstream deposition patterns, cause water temperatures and turbidity levels of the water to rise, increase the level of nutrients (nitrates and phosphorus), decrease the quality of existing fisheries, and promote algal growth.

Since most of the streams crossed by U.S. Highway 212 and Highway 59 are intermittent and no work is proposed at the existing Powder River and Little Powder River bridges, construction would not occur in flowing water. Because MDT's Erosion Control Plan would also be implemented to control erosion and sediment transport during and after construction, the Epsie NHS Corridor projects would not cause notable adverse effects on surface water quality. The fact that these highway improvements would be implemented at different times also ensures that surface disturbances (and the chance for erosion) are limited to individual project areas and not the entire NHS Corridor.

Potential water quality impacts can also occur due to highway runoff during the operational life of the road improvement projects. The primary constituents in highway runoff include suspended sediments (pavement wear and dirt), lead (gasoline, tire filler), zinc (tire filler, motor oil stabilizers), copper (metal platings, brake linings), and petroleum (gasoline, antifreeze, hydraulic fluids). Impervious road surfaces produce runoff amounts proportional to the pavement area. Rural roadways with gravel shoulders and ditches tend to slow runoff through absorption into adjacent vegetation and soils.

During the mid-1980s, the FHWA conducted extensive nationwide studies to determine highway runoff constituents, amounts relative to roadway types and traffic conditions, and the potential impacts to surface water resources *(Pollutant Loadings and Impacts from Highway Stormwater Runoff, Volume* I, FHWA, April 1990). FHWA's research concluded that pollutants in highway runoff are not present in amounts sufficient to threaten surface or groundwater where Average Daily Traffic (ADT) volumes are below 30,000. Since traffic volumes in the Epsie NHS Corridor are not expected to exceed 1,500 vehicles per day in the foreseeable future, it can be reasonably concluded that runoff from the highway would not cause significant degradation of surface or groundwater in the project areas.

Small amounts of fill below the ordinary high water mark may be needed at stream crossings for the replacement of culverts. Work in or near streams in the project areas would require *124SPA* Stream Protection Permits from the MONTANA DEPARTMENT OF FISH, WILDLIFE & PARKS (MDFWP). Likewise, the placement of any fill material in surface waters or wetlands would be subject to the issuance of Section 404 permits by the U.S. ARMY CORPS OF ENGINEERS (COE). These and other permit requirements are discussed at the end of this Part.

MDT has proposed incorporating a minor channel change at Pumpkin Creek near the west end of the Epsie-East & West project area. This stream modification would involve relocating a portion of the existing stream channel where the creek parallels the north side of the existing highway. Approximately 100 m (330 feet) of the stream channel would need to be relocated. The relocation area is within a delineated wetland site. **FIGURE 9** shows the proposed Pumpkin Creek channel relocation. The proposed channel change would be designed to ensure that the new channel has approximately the same length and gradient as the existing stream channel. This work would be done in-the-dry to minimize the potential for water quality impacts.

Because the area of soil disturbance for each project would exceed 2.0 ha (5.0 acres), the proposed projects must comply with the requirements of the National Pollutant Discharge Elimination System (NPDES). In accordance with recent amendments to **75-5-401 (1) M.C.A.** enacted by the Montana Legislature, MDT would develop storm water pollution prevention plans incorporating best management practices for each corridor project and issue notices to the MDEQ. The notices would identify MDT's intent for the proposed projects to be covered under the General Permit for storm water discharges associated with construction activity.

Reconstructing U.S. Highway 212 following the route of the proposed Little Powder River

Realignment would encounter the same intermittent streams as those crossed by the existing highway.

Groundwater hydrology in the project area would be unaffected by the proposed highway improvements since necessary excavation would not expose or affect the groundwater table. A review of information from the Montana Bureau of Mines and Geology Groundwater Information Center shows that static water levels for most wells in the Epsie NHS Corridor exceed 10 m (32.8 feet) in depth with many domestic wells exceeding more than 30.5 m (100 feet). The maximum cuts for the new road would be well above static ground water level and underlying aquifers would remain unaffected by project construction.

The proposed projects would have no direct adverse impacts to groundwater or public drinking water supplies.

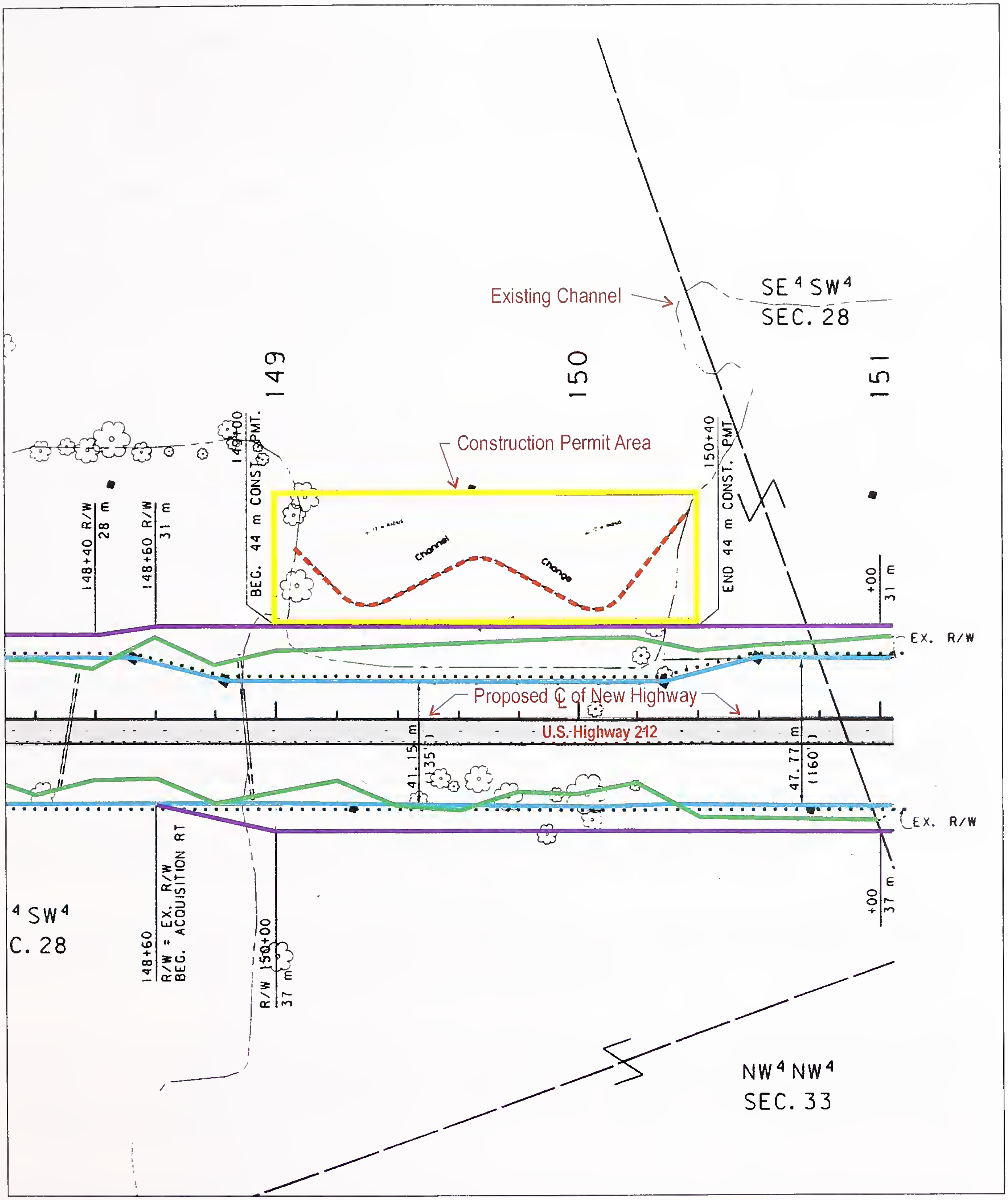
Cumulative Impacts. The proposed Epsie NHS Corridor improvements, together with the impacts of present and reasonably foreseeable future developments in the area, would not cause any notable cumulative effects on the quality or quantity of surface or groundwater in the project area. Highway improvements would be implemented at different times and locations on transportation corridors leading to and from Broadus. MDT's engineered road designs and the application of upland BMPs would avoid or mitigate potential water quality impacts in the general vicinity of these projects.

Water quantity and quality issues are anticipated with the increased development of coal bed methane in the Powder River Basin. The production of coal bed methane may lower the level and pressure of aquifers within coal beds in the Basin thereby affecting some local springs and water supply wells. The water discharged by the coal bed methane wells in the Powder River Basin may also have elevated salinity levels and may not be generally unusable for irrigation. The proposed highway improvements projects would not contribute to water quality and quantity concerns in this region of southeastern Montana.

Impacts of the No Build Alternative. The No Build Alternative would not cause any new effects to surface or groundwater in the Epsie NHS Corridor.

Mitigating Measures. The following measures would be implemented to minimize water quality impacts in the Epsie NHS Corridor.

- *An Erosion Control Plan employing Best Management Practices for controlling erosion and sediment transport would be implemented in each project area.*
- *Any restrictions on work near streams or in wetlands would be specified as terms of water-related permits obtained from the MDEQ, MDFWP, and the Corps of Engineers.*
- *Development of revegetation plans, erosion control plans, and storm water pollution preventions plans would be coordinated with appropriate permitting and resources agencies.*



Proposed Channel Realignment
Proposed R/W Line
Existing R/W Line
Construction Limits

Figure 9
Pumpkin Creek
Channel Change

- *The proposed channel change at Pumpkin Creek would be done "in-the-dry" to minimize the potential for water quality impacts. Additionally, the vegetation and topsoil in the existing channel would be salvaged, stockpiled, and placed on the slopes of the new channel to enhance the development of vegetation.*

4. Floodplain Impacts

Impacts of the Preferred Alternative. Executive Order 11988, *Floodplain Management,* requires that federal agencies, in carrying out their proposed projects, provide leadership and take action to reduce the risk of flood loss; minimize the impacts of floods on human safety, health, and welfare; and restore and preserve the natural and beneficial values served by floodplains.

The proposed Epsie-East & West and Epsie-East projects would not encroach on any delineated floodplains. Therefore, floodplains would not be affected by these projects. A delineated 100-year floodplain exists at the Cottonwood Creek, an ephemeral stream, located within the Town of Broadus. The Powder River and Little Powder River and their delineated floodplains are also crossed by the proposed Broadus-East project. However, no work is planned for either the Powder or Little Powder River bridges or within the delineated floodplains for these streams.

The Broadus-East project would replace the existing bridge over Cottonwood Creek in Broadus with a double reinforced concrete box culvert. This work would place fill and the new drainage structure within the delineated floodplain of Cottonwood Creek. However, the new box culvert would be appropriately sized to handle the 100-year flood without interruption to public transportation due to flood damage to the roadway or the structure. The new culvert would not substantially increase upstream water surface elevations over existing conditions for the 100-year flood event. MDT standard procedures and specifications would be employed to ensure that the required encroachment meets FHWA guidelines. A floodplain permit from Powder River County would be required prior to construction of the new Cottonwood Creek crossing.

The Town of Broadus is presently working to address surface drainage and floodplain issues within the community. The Town has discussed the possible construction of a dike between the development in Broadus and the Powder River with the COE.

The proposed projects would not promote or encourage development within the base floodplain, nor increase flood liability hazards from their construction. Therefore, the Epsie NHS Corridor projects are considered to be in compliance with Executive Order 11988 and meet floodplain management criteria.

Cumulative Impacts. No cumulative floodplain impacts are anticipated from the proposed Epsie NHS Corridor improvements and other present and future development activities in the area. This conclusion was reached because of the limited involvements in delineated floodplains associated with the Epsie NHS Corridor projects and other planned highway improvements in the area. MDT projects are also typically designed to minimize floodplain encroachments and to ensure that the elevations of base floods do not substantially increase as a result of highway or bridge improvement projects.

Impacts of the No Build Alternative. This alternative would have no effect on floodplains in the project area. There are no risks of new flooding incurred, no impacts on natural and beneficial floodplain values, and no likelihood of incompatible floodplain development.

Mitigating Measures. The following measures would be implemented to minimize any floodplain concerns associated with MDT's proposed projects in the Epsie NHS Corridor.

- *MDT would obtain a Floodplain Development Permit from the Powder River County Commissioners for construction activities within the delineated floodplain of Cottonwood Creek.*
- *MDT would coordinate the proposed Broadus-East project with the Town of Broadus to ensure proposed activities are considered in the community's surface drainage plan.*

5. Air Quality Impacts

Impacts of the Preferred Alternative. The Epsie NHS Corridor reconstruction projects are actions whose individual and cumulative effects would be minor and would not affect regional emissions. These conclusions can be reasonably made on the basis of analyses done for many similar projects across the United States. For these reasons, the Preferred Alternative would not be expected to result in adverse air quality impacts.

The proposed highway reconstruction projects are located in an unclassifiable/attainment area of Montana for air quality under 40 CFR 81.327, as amended. As such, the projects are not covered under the U.S. ENVIRONMENTAL PROTECTION AGENCY'S (EPA's) **Final Rule** of November 24, 1993 on Air Quality conformity. Therefore, the proposed projects comply with *Section 176(c)* of the *CLEAN AIR ACT* **(42 U.S.C. 7521(a))**, as amended.

Short-term air quality impacts would be anticipated during construction of the proposed projects due to the disturbance of relatively large areas and operation of heavy equipment in work zones. These impacts would be minor and limited to the construction period. MDT anticipates that dust control would be needed for construction within the Town of Broadus and on any streets that may carry detoured traffic.

Cumulative Impacts. No cumulative air quality impacts are anticipated from the proposed Epsie NHS Corridor improvements and other present and future development activities in the project area. The existing air quality of this region of Montana is high and the proposed improvements would not cause traffic increases that would cause adverse effects to this condition.

Impacts of the No Build Alternative. This alternative would cause no further air quality impacts within the project area.

Mitigating Measures. The following measure would be implemented to minimize any air quality impacts associated with the construction of MDT's proposed projects.

- *MDT would incorporate all necessary dust control measures into the plans for the proposed projects.*

6. Noise Impacts

Impacts of the Preferred Alternative. The proposed projects involve reconstruction of an existing facility without substantial changes in the road's horizontal or vertical alignments except in the area of the proposed Little Powder River Realignment. Although the proposed alignment for U.S. Highway 212 varies substantially from the existing alignment at this location, the affected lands are used for agriculture and there are no noise sensitive receivers in the area where the new road would be built. The proposed alignment shift would benefit two residences in the realignment area since the new road would be further away from the homes than the existing facility.

The Epsie NHS Corridor projects would not increase the number of through traffic lanes on U.S. Highway 212 or Highway 59. Due to the nature of the proposed projects and their rural location, MDT determined a detailed noise analysis is not required and that Design Year noise levels would not exceed the Noise Abatement Criteria 23 CFR 772. Traffic noise level increases would be insignificant with the construction of the Preferred Alternative.

Short-term noise impacts would be anticipated during construction of the proposed projects due to the operation of heavy equipment. These minor impacts would occur only in and near work zones and be limited to the construction period.

Cumulative Impacts. The proposed Epsie NHS Corridor projects would not result in any cumulative noise impacts. Road reconstruction projects in Powder River County and adjoining counties would generally occur within or near existing transportation corridors and traverse agricultural lands with few noise sensitive receivers.

Impacts of the No Build Alternative. This alternative would cause no further noise impacts within the Epsie NHS Corridor.

7. Impacts to Vegetation

Impacts of the Preferred Alternative. The proposed highway improvements would result in the permanent loss of vegetation where the roadway is realigned or widened. In the Epsie East-West and Epsie East project areas, the vegetation loss would primarily occur on the north side of U.S. Highway 212 due to the proposed shift in the roadway's alignment. In the rural portion of the Broadus-East project area, the vegetation loss would be more variable due to several alignment offsets. In the Town of Broadus, little roadside vegetation exists so vegetation loss would be minimal within the community. Construction in the vicinity of Cottonwood Creek in Broadus would disturb a grassed roadside slope adjacent to a Cottonwood Park. This disturbance would be confined to the existing highway right-of-way and the disturbed area would be revegetated following construction.

The grassland community would be the primary community affected by the Epsie NHS Corridor projects. Very few trees occur in the proposed construction area; some cottonwoods would be lost, primarily in the cottonwood riparian communities along the Powder River, Little Powder River, and East Fork Little Powder River. Few (if any) pines in the ponderosa pine community within the project corridor would be lost. Cropland losses, if any, would be minor.

The Little Powder River Realignment represents a notable departure from the location of the existing highway and its implementation would require that vegetation be permanently cleared where the new alignment would be established. The proposed realignment would require an estimated right-of-way area of about 15.2 ha (35.5 acres) and vegetation within most of this area would be cleared to accommodate construction of the new road segment. This loss of vegetation would be offset in part by obliterating the old section of U.S. Highway 212 and reclaiming the former right-of-way.

The Epsie NHS Corridor projects would not affect any federally-listed threatened or endangered plant species or any rare and sensitive plant species listed by the MNHP or Custer National Forest.

Temporary disturbances would occur where vegetation is cleared from the right-of-way, at staging areas for construction equipment and at borrow sites. Many noxious weed species gain a foothold after ground disturbances; therefore the potential for the spread of noxious weeds is a concern due to the extent of the disturbances associated with the proposed projects. Once noxious weeds become established, they are often extremely difficult and very expensive to eradicate or control. Invasive noxious weeds can reduce the value of an area for rangeland, wildlife habitat, or other uses. In accordance with Executive Order No. 13112 *Invasive Species*, MDT would implement measures with each project to help prevent the introduction of invasive species into the Epsie NHS Corridor. These measures would include coordinating the projects with the Powder River County Weed Board, the DNRC, and the BLM, promptly reseeding disturbed areas with desirable vegetation, and requiring MDT's Contractor(s) to follow procedures to prevent the spread of noxious weeds.

Cumulative Impacts. Ground disturbing activities from the proposed Epsie NHS Corridor projects and other present and future development in the project area could result in the loss of minor amounts of native vegetation and offer the potential for the spread of noxious weeds.

Impacts of the No Build Alternative. This alternative would cause no further impacts on vegetation within the Epsie NHS Corridor.

Mitigating Measures. The following measures would be implemented to minimize vegetation impacts and reduce the potential for the spread of noxious weeds in the Epsie NHS Corridor.

- *All grubbing and clearing operations would be strictly confined to MDT's defined construction limits.*
- *Disturbed areas would be reseeded as quickly as possible after construction.*

- *A revegetation plan would be developed for each highway project to be followed by the Contractor. The plan would include specifications on seeding methods, seeding dates, types and amounts of mulch and fertilizer, and seed mix components. The plan would also be submitted to the Powder River County Noxious Weed Board, the DNRC, and BLM for review.*
- *The Contractor must also follow the requirements of the COUNTY NOXIOUS WEED MANAGEMENT ACT and all county and contract noxious weed control provisions.*
- *Mulch used for revegetation would be certified as weed-free.*
- *Inspect borrow sites prior to use so that sites with chronic weed problems can be excluded from use during construction.*

8. Wetlands Impacts

Impacts of the Preferred Alternative. Construction of the proposed highway improvements would result in unavoidable encroachments into wetlands at some locations in the Epsie NHS Corridor due to realignments, road widening, slope flattening, and stream crossings. Wetland vegetation would be removed and hydric soils would be covered with the roadbed and fill slopes in impacted areas. The preliminary designs of the proposed highway improvements projects have been developed to minimize encroachment into wetlands. However, at some locations wetlands exist on both sides of the highway making it impossible to improve the road or replace culverts without encroaching on wetlands.

The estimated amount of wetlands that would be impacted by the project is approximately 0.35 hectares (0.76) acres. **TABLE 10** shows a break down of this total by site. As the table shows, most of the impact would occur at three wetland sites, Site 2 (a Category III wetland), Site 8 (a Category IV wetland), and Site 15 (a Category III wetland).

Wetland Sites 21 and 22 are the only wetlands that exist in the area of the proposed Little Powder River Realignment. Site 21 is associated with a flowing well on land between the existing highway and the proposed new location for U.S. Highway 212. This site exists only on the south side of the existing highway and does not extend across the present highway. Site 22 is associated with a stock pond located on the north side of the existing highway. Preliminary plans show the proposed Little Powder River Realignment would not impact either Wetland Site 21 or 22.

Cumulative Impacts. The potential exists for other highway reconstruction projects and developments in and around Powder River County to impact wetlands. However, no cumulative impacts to wetlands are foreseen if efforts are taken to avoid wetlands or to adequately mitigate for wetlands affected by ongoing and future development activities in the area.

Impacts of the No Build Alternative. This alternative would cause no further impacts to wetlands within the Epsie NHS Corridor.

Table 10: Wetland Locations and Estimated Impacts in the Epsie NHS Corridor

Site No.	Approximate Station No.	Location and Description	Estimated Area within Proposed R/W hectares (acres)	Estimated Area of Impact hectares (acres)
EPSIE- EAST & WEST				
1	145+60	Pumpkin Creek, north and south of highway	0.03 (0.08)	0.03 (0.08)
2	149+00 to 150+04	Pumpkin Creek, north of highway	0.06 (0.16)	0.06 (0.16[a])
3	149+00	Tributary to Pumpkin Creek, south of highway	0.01 (0.03)	0.01 (0.03)
4	149+60 to 150+02	Tributary to Pumpkin Creek, south of highway	<0.01 (<0.01)	<0.01 (<0.01)
7	199+08	Tributary to Sixmile Creek, south of highway, stock pond upstream	<0.01 (<0.01)	<0.01 (<0.01)
8	219+00 to 218+80	Near stock pond on tributary to Sixmile Creek, north of highway; saline	0.08 (0.19)	0.08 (0.19)
		PROJECT SUBTOTAL	0.20 (0.48)	0.20 (0.48)
EPSIE EAST				
10	RP 102.4 to 102.7[b] 935+10 to 950+00	Tributary west of pond on North Fork Sand Creek, north of highway, near US 212/US 59 junction	<0.01 (0.01)	<0.01 (0.01)
10A	RP 102.5[b] 942+40	Saline depression near pond on North Fork Sand Creek, north of highway, near US 212/US 59 junction	<0.01 (0.01)	<0.01 (0.01)
11	RP 102.7[b] 953+60	Depression below pond on North Fork Sand Creek, north of highway, near US 212/US 59 junction	<0.01 (0.01)	<0.01 (0.01)
12	RP 102.8[b] 955+73	Drainage channel below pond on North Fork Sand Creek, north and south of highway, near US 212/US 59 junction	<0.01 (0.01)	<0.01 (0.01)
		PROJECT SUBTOTAL	<0.04 (0.04)	<0.04 (0.04)
BROADUS-EAST				
14	19+10 to 19+60	Riparian wetland east side of Powder River, south of highway	0.01 (0.03)	0[c]
15	200+00 to 201+00	Tributary to East Fork Little Powder River, north of highway, stock pond upstream	0.06 (0.14)	0.06 (0.14)
16	194+70	Tributary to East Fork Little Powder River, north and south of highway	<0.01 (0.01)	<0.01 (0.01)
17	188+60	Tributary to East Fork Little Powder River, north of highway	0.02 (0.05)	0.02 (0.05)

[a] Channel relocation area

[b] Design plans are not available for the Epsie East section, therefore, Reference Posts and As-Built stations were referenced and the proposed right-of-way was estimated.

[c] Assumed no instream work associated with bridge repairs at this location, therefore assumed no impact to wetland.

Table 10: Wetland Locations and Estimated Impacts in the Epsie NHS Corridor (Continued)

Site No.	Approximate Station No.	Location and Description	Estimated Area within Proposed ROW hectares (acres)	Estimated Area of Impact hectares (acres)
BROADUS-EAST				
18	119+40 to 119+60	Fringe wetlands adjacent to Little Powder River, north and south of highway	0.01 (0.03)	0[c]
19	125+10 to 125+20	Fringe wetlands adjacent to East Fork Little Powder River, north and south of highway	<0.01(<0.01)	0[c]
20	157+70	Tributary to East Fork Little Powder River, north and south of highway, stock pond upstream	0.02 (0.04)	0.02 (0.04)
21	N/A[d]	Wetland associated with flowing well on private land south of existing right-of-way, north of proposed realignment	--	--
22	N/A[d]	Wetland associated with private pond north of existing right-of-way in realignment area	--	--
		PROJECT SUBTOTAL	0.14 (0.31)	0.11 (0.24)
EPSIE NHS CORRIDOR TOTAL			0.38 (0.83)	0.35 (0.76)

[c] Assumed no instream work associated with bridge repairs at this location, therefore assumed no impact to wetland.

[d] Wetland **not** in the existing right-of-way or proposed re-alignment, but included as a possible avoidance area depending on construction needs for realignment.

Mitigating Measures. The following measures would be implemented to minimize impacts to wetlands in the project corridor.

- *The designs for the proposed highway improvements projects would be developed to avoid or minimize encroachment into wetlands.*
- *MDT would continue to seek wetland mitigation opportunities in the area of these proposed projects.*

9. Impacts to Wildlife and Fisheries Resources

Impacts of the Preferred Alternative on Wildlife. In general, the impacts on wildlife associated with the reconstruction of US Highway 212 and Highway 59 would include: the temporary loss of and avoidance of habitats adjacent to the construction area; direct mortality from vehicles and construction equipment; and permanent habitat degradation and/or displacement.

The shifts in alignment, road widening, and slope flattening associated with the proposed highway improvements on wildlife would result in the permanent loss of minor amounts of habitat adjacent to the roadside. Additionally, wildlife species that rely upon these roadside areas for habitat would be temporarily displaced during construction due to noise and human activities.

The proposed projects would affect the grasslands and shrub lands adjacent to the road used by some birds for nesting and by some small mammals and reptiles. Some trees would be lost in the cottonwood riparian and ponderosa pine habitats and a small number of nesting sites or potential nesting sites for birds would be lost. The replacement of culverts and removal of rocky outcrops due to regrading the roadside would also eliminate other potential nesting sites. This type of localized loss is common with road reconstruction, and such losses are usually offset by recruitment from adjacent populations over time. Such losses would reduce the available prey for raptors and other carnivores by a negligible amount. Other species of wildlife that may occasionally use the project area (e.g., big game and fur-bearers) would likely avoid the project area during construction due to the noise and human presence.

Construction activities could also result in mortalities of some less mobile wildlife species if individuals are unable to escape construction equipment.

Once construction is finished, the improved road could result in fewer collisions with wildlife because motorists would have improved stopping sight distance and greater clear zone. However, the improved highway may result in increased traffic and speed, and thus increase the potential for vehicle collisions with big game, small mammals, and birds. Some level of vehicle/wildlife mortality is largely unavoidable with road use. Such collisions are not likely to affect local wildlife populations.

Impacts of the Preferred Alternative on Fisheries and Aquatic Resources. Impacts to aquatic resources as a result of the proposed highway improvements are expected to be minimal. The two bridges that cross streams with fishery resources (i.e., the Powder River and the Little Powder River) would be repaired but not be replaced. The proposed repairs would not impact the rivers or their associated fisheries since instream work would not be required.

Culverts throughout the Epsie NHS Corridor would be replaced or extended. These activities could result in increased sedimentation, particularly if water is present during construction. Increased sedimentation could indirectly affect downstream fish if construction-related sediment reached occupied reaches. This impact could only occur during storm events or if an affected creek is flowing at the time of construction. Impacts, if any, would likely be negligible since most streams crossed by the highway are ephemeral. Since the Powder River and Little Powder River have high background levels of suspended solids, any additional project-related sediment would likely be immeasurable in these streams.

Impacts of the Preferred Alternative on Rare and Sensitive Species. The highway improvements would be unlikely to impact rare and sensitive species wildlife or fish. The only rare and sensitive species known to occur in the project area are the milk snake and the leopard frog. The presence of the existing highway probably limits the value of the habitat for most of the species.

It is possible that the project could directly impact (e.g., mortality or displacement) a milk snake or leopard frog if they are occupying habitat in the project area at the time of construction. Any loss is unlikely to affect the status of either the milk snake or leopard frog. Globally, the milk snake is demonstrably secure; and the leopard frog is of concern primarily in western Montana, but remains common in southeastern Montana.

Cumulative Impacts. No adverse cumulative effects to wildlife or fisheries are anticipated as a result of the proposed Epsie NHS Corridor projects and other present and future development activities in the project area. The anticipated transportation system improvements and other development activities in the Broadus area would not likely produce substantial increases in traffic or permanent population that could adversely affect wildlife or their habitats.

Impacts of the No Build Alternative. This alternative would cause no further impacts to wildlife, fisheries, or aquatic resources in the Epsie NHS Corridor.

Mitigating Measures. The following measures would be implemented to minimize the potential for impacts to wildlife and aquatic resources as a result of the proposed highway improvements:

- *Best Management Practices (BMPs) would be followed to minimize the potential for increasing sediment loads in any of the project area waterways.*
- *Disturbed areas would be reseeded as quickly as possible after construction.*
- *A revegetation plan would be developed for each highway project to be followed by the Contractor.*
- *Where replacement of existing barbed wire right-of-way fence on Federal land is proposed, the fence would be constructed to facilitate passage by pronghorn antelope.*

10. Impacts to Threatened and Endangered Species

The identification of threatened and endangered species and evaluation of potential effects was conducted in accordance with *Section 7* of the *ENDANGERED SPECIES ACT,* **(16 U.S.C. 1531-1543)** as amended. Based on coordination with the U.S. FISH AND WILDLIFE SERVICE (USFWS), the following threatened, endangered, proposed, or candidate, species may occur in the Epsie NHS Corridor:

- Black-footed Ferret *(Mustela nigripes)* -- endangered species;
- Whooping Crane *(Grus Americana)* -- endangered species;
- Bald Eagle *(Haliaeetus leucocephalus)* -- threatened species;
- Mountain Plover *(Charadrius montanus)* -- proposed threatened species;
- Sturgeon Chub *(Macrhybopsis gelida)* -- candidate species;
- Swift Fox *(Vulpes velox)* -- candidate species; and
- Black-tailed Prairie Dog *(Cynomys ludovicianus)* -- candidate species.

Impacts to threatened and endangered species can be categorized as direct or indirect effects and such effects may be short-term or long-term. Direct effects are **results** of the proposed action. Direct effects may include loss of habitat and mortality of individuals. Indirect effects are effects caused by the proposed action that are reasonably certain to occur. Primary indirect effects include potential disturbance and displacement of individuals, decrease in reproductive success, and habitat degradation. For many species, the magnitude of effects would depend on the timing and duration of construction activities.

The potential impacts associated with reconstructing the Epsie NHS Corridor on identified threatened and endangered species are described below and summarized in **TABLE 11** found at the conclusion of this section.

- **Black-footed Ferret.** The proposed projects would not result in either direct or indirect impacts to black-footed ferrets since they are only known to occur some 265 km (165 miles) north in the project area. The NHS Corridor also lacks suitable habitat (prairie dog towns) for the species.

- **Whooping Crane.** The proposed improvements to U.S. Highway 212 and Montana Highway 59 would not result in either direct or indirect impacts to whooping cranes since the species are rare migrants in Montana. When observed, they have been reported along the Missouri River in northeastern Montana, over 160 km (100 miles) north of the Epsie NHS Corridor. Additionally, whooping cranes are known to avoid human disturbance. Therefore, if whooping cranes were to migrate through the area during construction, they would likely avoid the project area and any impacts.

- **Bald Eagle.** Direct impacts to bald eagles as a result of the highway improvements are expected to be minimal, but could include displacement from potential foraging, roosting, and/or nesting sites during construction in the cottonwood riparian areas. Any impacts would likely be minor, as other foraging, roosting, and nesting habitat is available in the surrounding area. The cottonwood riparian habitat found along the Powder River and Little Powder River appears to generally extend along these waterways. If nests occur within 1.6 km (1 mile) of the disturbance, construction activities near these stream crossings could result in nest abandonment or failure.

  If traffic increases in the project area as a result of the improvements, an indirect impact would be the potential for increased vehicle-related mortalities, as bald eagles often feed on road-killed animals. Another possible indirect effect is that road construction at the river crossings has some potential for affecting water quality (e.g., increased sedimentation) and the associated aquatic community, including fish availability, a prime food source for bald eagles. However, such impacts are unlikely, and (if any) would be temporary. The power lines adjacent to the highway present some potential for electrocution of bald eagles and other raptors. Since some power lines adjacent to the highway may be moved to accommodate the widened highway, the potential for electrocution should be considered an indirect impact related to the projects.

- **Mountain Plover.** Because the project area does not contain suitable mountain plover habitat and no mountain plovers have been reported from the general area, they are unlikely to occur in the project area, and therefore unlikely to be impacted by the proposed highway improvements.

- **Sturgeon Chub.** The sturgeon chub is known to occur in the Powder River, and is possibly also found in the Little Powder River, therefore the proposed projects could potentially affect this species. However, direct impacts are unlikely because the existing bridge structures over the Powder River and Little Powder River would remain in place with only upgrade work proposed for the bridges. In-stream work is not necessary for the proposed structure upgrades, so direct mortality or habitat degradation is very unlikely.

  Indirect impacts to sturgeon chub could result from the highway improvements if water quality in the Powder River is affected (e.g., increased sedimentation). Water quality impacts associated with the projects are expected to be minimal because there would be no in-stream work associated with the bridge upgrades. MDT must also obtain federal and state permits that generally include provisions to control erosion and protect water quality. Water quality could also be impacted by an accidental spill or release of gas, oil, or other chemicals into the Powder River or Little Powder River. If such an event occurred, sturgeon chub in the area and downstream could be affected.

- **Swift Fox.** Habitat in the project area is suitable for swift fox, but no observations have been recorded in the general project area over the last twenty years. In the unlikely event that undocumented populations of swift fox are present within the project area, earthwork associated with construction could result in direct effects including mortality and habitat loss. Research suggests that swift foxes are often killed by vehicles when feeding on road-killed animals. If traffic on U.S. Highway 212 increases as a result of the proposed improvements, the potential for vehicle-related mortalities would also increase. It is unlikely that vehicle-related deaths would be a substantial cause of swift fox mortality because of the apparent low density of swift fox in this area. Potential project effects on swift fox are considered immeasurable.

- **Black-tailed Prairie Dog.** The project area does not contain any black-tailed prairie dog towns and the scarcity of prairie dog towns in the general area suggests they are unlikely to move into the project area in the foreseeable future. No impacts to black-tailed prairie dogs are expected as a result of the proposed highway improvements.

Table 11: Summary of Potential Impacts to Endangered, Threatened, Proposed, and Candidate Species in Epsie NHS Corridor

Species	Potential for Impact
Black-footed Ferret	None - no habitat within or near project area
Whooping Crane	None - habitat of little value for migrating whooping cranes, not a known stopover site
Bald Eagle	Low - minor loss or degradation of cottonwood riparian habitat, potential increase in vehicle-related mortality
Mountain Plover	None - no habitat, or some marginal habitat, occurs for this species within or near project area; no known to occur in general vicinity
Sturgeon Chub	Very low - direct impacts not likely because no instream work proposed in occupied habitat; indirect impacts negligible
Swift Fox	Very low - not known to occur in general area, but because suitable habitat is present, direct impacts including vehicle-related mortality and habitat degradation could occur
Black-tailed Prairie Dog	None - no towns/colonies occur within or near the project area

Cumulative Effects on Threatened and Endangered Species. Past land use activities in the Epsie NHS Corridor are not known to have resulted in any harm to listed threatened, endangered, and candidate species. Because similar activities are likely to continue into the foreseeable future, adverse cumulative effects to the black-footed ferret, whooping crane, bald eagle, mountain plover, sturgeon chub, swift fox, and black-tailed prairie dog would not be expected.

Determination of Effects. Based on the impact analyses presented above, MDT concluded the proposed reconstruction of the Epsie NHS Corridor would have **no effect** the black-footed ferret and whooping crane. For candidate and proposed species, the proposed highway projects would **not likely jeopardize the continued existence of** mountain plover, sturgeon chub, swift fox, and black-tailed prairie dog.

The proposed projects could affect bald eagles or their habitat. However, potential effects from the Epsie NHS Corridor projects would be considered discountable, insignificant, or beneficial under the *ENDANGERED SPECIES ACT*. While some effects could occur to the bald eagle, effects are not expected to reach the level where a "take" occurs and habitat would not be significantly modified or degraded. For these reasons, MDT concluded the proposed Epsie NHS Corridor projects are **not likely to adversely affect** the bald eagle.

The USFWS was provided with a copy of MDT's Final Biological Resources Report and afforded an opportunity to review the determinations of effect for the threatened, endangered, proposed, or candidate species that may occur in the Epsie NHS Corridor. In correspondence dated December 28, 2000, the USFWS concurred with MDT's conclusions that the proposed highway improvement projects will not likely adversely affect threatened or endangered species. The USFWS also concluded that formal consultation is not required. A copy of the USFWS letter is provided in **APPENDIX B**.

Impacts of the No Build Alternative. This alternative would not cause any new impacts to threatened or endangered species that may occur in the Epsie NHS Corridor.

Mitigating Measures. As shown in **TABLE 10** above, no potential for impacts is expected for the black-footed ferret, whooping crane, mountain plover, and black-tailed prairie dog as a result of the project, therefore no conservation measure are recommended for these species. Following are recommended conservation measure that would apply to bald eagle, sturgeon chub, and swift fox.

- *The project managers for the construction of the proposed highway projects would contact an MDT biologist to assess the overall status of bald eagles in the project area prior to beginning work. Spatial, and/or time of work restrictions may be necessary if bald eagle nests are established in the project area prior to construction.*
- *Construction operations would be confined to MDT's defined construction limits, particularly in the cottonwood riparian habitat.*
- *MDT maintenance crews would be encouraged to remove road-killed big game and other animals from the road to reduce the possibility of eagle/vehicle collisions.*
- *Best Management Practices (BMPs) would be followed to minimize the potential for increasing sediment loads and to prevent spills of fuels/lubricants from entering any water body.*
- *Overhead power lines relocated during construction would be raptor-proofed in accordance with "Suggested Practices for Raptor Protection on Power Lines" (Olendorff et al. 1981).*
- *Disturbed areas would be reseeded as quickly as possible after construction.*

B. Impacts to the Human Environment

1. Land Use Impacts

Impacts of the Preferred Alternative. The proposed improvement of the Epsie NHS Corridor would impact minor amounts of land adjacent to the existing highway. With the exception of developed lands within the Broadus area, nearly all of the affected land is used for grazing livestock, raising forage crops, or for dryland farming.

Agricultural impacts include the acquisition of minor amounts of cropland and pasture land and modifications to field access locations. Generally, access to farm fields or pastures from existing U.S. Highway 212 and Highway 59 would be maintained, although the location of access points may be moved to ensure adequate sight distance is provided.

The proposed projects would not adversely affect highway commercial, commercial, and residential development along the roadway. This proposed action would not substantially change or eliminate access to adjacent properties within the project corridor.

The Little Powder River Realignment would have few if any adverse effects on land use in adjoining areas since affected properties are primarily used for livestock grazing. With the proposed realignment, U.S. Highway 212 would be shifted away from a ranch house near the east end of the proposed realignment benefiting residents with reduced traffic noise levels and increased privacy.

The proposed reconstruction of U.S. Highway 212 and Highway 59 would not be inconsistent with Powder River County's Comprehensive Plan.

The proposed highway improvements would not be likely to affect the goals or objectives employed by the BLM and DNRC for managing land uses and activities on federal and state lands in the Epsie NHS Corridor.

Cumulative Impacts. The planned highway improvements would not encourage new or undesirable growth and development and would not substantially change property values in the Broadus area.

Impacts of the No Build Alternative. This alternative would cause no changes to existing land uses along U.S. Highway 212 and Montana Highway 59 within the Epsie NHS Corridor.

2. Right-of-Way and Utility Impacts

Impacts of the Preferred Alternative. **TABLE 12** shows the estimated area of new right-of-way required for each of the Epsie NHS Corridor projects. Together, the projects would require about 138.8 ha (342.3 acres) of new right-of-way.

Table 12: Anticipated Right-of-Way (R/W) Impacts by Project in the Epsie NHS Corridor

Project	Additional R/W Area Needed	New Easement Area Needed	Construction Permit Area
Epsie - East & West	31.8 ha (77.9 ac)	2.8 ha (6.7 ac)	0.10 ha (0.26 ac)
Epsie-East (Estimated from As-Built Plans)	24.0 ha (59.3 ac)	Unknown*	Unknown*
Broadus - East (With Little Powder River Realignment)	83.0 ha (205.1 ac)	0.2 ha (0.4 ac)	2.6 ha (6.5 ac)
Corridor Total	**138.8 ha/342.3 ac**		

* Preliminary Design work not completed to point where this is known.

Please note that the right-of-way information presented in **TABLE 12** is based on preliminary designs and is subject to change. Right-of-way acquisitions are presented to provide a general indication of the extent of the highway improvement projects' impacts. During the process of final design, specific right-of-way needs would be identified and individual landowners contacted.

Roadway improvements would result in minor reductions of agricultural and grazing lands adjacent to the highway. Such impacts would be most notable in the vicinity of the Little Powder River Realignment where the existing highway and the proposed alignment of the new road are separated by some 300 m (985 feet). The Little Powder River Realignment would primarily affect five landowners, with the majority of the new right-of-way for the realignment being needed from the T & C Smith Ranch.

The proposed corridor projects would require new easements or new rights-of-way across lands owned and managed by the BLM and the State of Montana. Any existing right-of-way on BLM land no longer needed for the planned highway improvements would revert to the federal agency. MDTs' preliminary Right-of-Way Plans show that the proposed Epsie-East & West project would require a total of 1.03 ha (2.29 acres) of new easement across BLM land in Section 34 of Township-3-South, Range-48-East and in Section 6 of Township-4-South, Range-49-East, M.P.M. The project would also require an estimated 1.79 ha (4.42 acres) of new easement on State of Montana land in Section 36 of Township-3-South, Range-48-East, M.P.M.

The Broadus-East project would require about 3.79 ha (9.36 ac) of new right of way in Section 36 of Township-5-South, Range-52-East, M.P.M.

The Epsie-East project would not affect any state or federal lands.

The proposed Epsie NHS Corridor projects would not require the relocation of any residents or businesses. All lands needed for right-of-way from private ownerships on this proposed project would be acquired by MDT in accordance with both the *UNIFORM RELOCATION ASSISTANCE AND REAL PROPERTY ACT* of 1970 (**P.L. 91-646**), and the *UNIFORM RELOCATION ACT AMENDMENTS* of 1987 (**P.L. 100-17**). Compensation for right-of-way acquisitions is made at "fair market value" for the "highest and best use" of the land.

Prescriptive, temporary, or permanent easements for existing highway right-of-way abandoned as a result of the proposed improvements to the Epsie NHS Corridor would revert to adjoining landowners. Any abandoned rights-of-way held in fee by MDT and that were acquired with federal highway funds, would be offered to a federal agency or typically sold at fair market value.

Overhead power lines, underground telephone cables, and buried fiber optic lines exist adjacent to the roadway throughout the Epsie NHS Corridor. These utilities may be in conflict with the proposed highway reconstruction at various locations. MDT conducted a Subsurface Utility Engineering (SUE) investigation for the Broadus-East project to determine the exact locations and depths to oil lines, natural gas lines, television and communication lines, and municipal water and sewer lines. The SUE investigation identified numerous instances within the Broadus community where the proposed reconstruction would conflict with existing underground utilities. Conflicting utilities would be relocated prior to construction.

Cumulative Impacts. Except for the incremental and minor loss of important farmland in Powder River County mentioned earlier in this Part, no other cumulative impacts are foreseen from the proposed right-of-way acquisition for the Epsie NHS Corridor projects. The utility relocations required by the proposed highway projects could motivate utility providers to update or make other improvements to their facilities within the corridor.

Impacts of the No Build Alternative - The No Build Alternative would not require any additional right-of-way, affect existing utilities, or result in the relocation of residents or businesses in the area.

Mitigating Measures. The following measures would be implemented to minimize the right-of-way and utilities impacts associated with the proposed highway improvements:

- *MDT's Right-of-Way design for each project would attempt to minimize the area required for the new highway and potential effects on adjoining landowners. Temporary construction permits would be used when possible to minimize the need for new right-of-way.*
- *MDT would coordinate with the appropriate utility companies and the Town of Broadus prior to construction to determine the timing and details of relocating conflicting utilities.*
- *Where replacement of existing barbed wire right-of-way fence on Federal land is proposed, the fence would be constructed to facilitate passage by pronghorn antelope. The bottom strand would be barbless and at least 41 centimeters (16 inches) above the ground and the number of stays between posts would be minimized to allow for looser wiring. Where the right-of-way is currently fenced with woven wire, the fence would be replaced with four- or five-strand barbed wire to contain sheep. In accordance with BLM fencing requirements, the bottom strand should be barbless and 20 centimeters (8 inches) off the ground.*

3. Transportation/Circulation Impacts

Impacts of the Preferred Alternative. The reconstruction of the Epsie NHS Corridor would provide traffic safety benefits and a more efficient facility for local residents and other road users. Road design and construction would address safety issues by increasing the width of the roadway, flattening fill slopes adjacent to the road, adjusting grades, curve radii, surfacing, and sight distance, and incorporating other safety measures to produce a roadway that is safe for its intended use. These measures would reduce the chances for and severity of accidents. The Epsie NHS Corridor would be reconstructed to MDT standards that reflect designs appropriate for both the type and level of traffic using the highway facilities.

Traffic circulation and safety would be enhanced within Broadus through the provision of a right turn lane for eastbound traffic at the intersection of Holt Street and Park Avenue and the installation of right turn and left turn lanes for traffic movements into an existing Rest Area/Weigh Station. The intersection of Holt and Park would also be revised from its current 3-way stop configuration to a 4-way stop.

No long-term changes to overall travel patterns would be likely except in the vicinity of the Little Powder River Realignment. However, road construction within the Epsie NHS Corridor could deter some commercial traffic from using the route if work causes notable delays in traffic.

Fluctuations in traffic volumes (particularly commercial traffic) on the route would occur over an extended period since the proposed projects would be implemented in successive years. Commercial traffic volumes would be expected to resume at previous levels and probably increase when highway construction is substantially completed within the NHS corridor.

The provision of an improved road with wider shoulder area would make the route more "bicycle-friendly" than the existing route. The perpetuation of the existing bicycle and pedestrian path and the construction of additional segments of such a path along the roadway would also enhance the ability of Broadus residents to bike and walk for recreation, commuting, or health reasons.

Cumulative Impacts. New right-of-way would be acquired with the Epsie NHS Corridor and along adjoining highway corridors for other planned MDT projects in Powder River and adjacent counties. The end result of these highway projects would be a substantially improved transportation system in Powder River, Custer, and Rosebud Counties. The planned highway improvements would not encourage new or undesirable growth and development and would not substantially change property values in the Broadus area. This conclusion was made because Broadus and surrounding areas have not experienced population growth for several decades. Improving highway facilities in Powder River and adjoining counties would not, on its own, be expected to increase population or encourage new development.

Impacts of the No Build Alternative. The No Build Alternative would not require any additional right-of-way, affect existing utilities, or result in the relocation of residents or businesses in the area.

Mitigating Measures. The following measures would be incorporated into the proposed projects to minimize impacts to traffic and circulation:

- *The roadway would be widened at the intersection of Park Avenue and Holt Street to accommodate a right turn lane for eastbound traffic.*
- *MDT intends to maintain traffic through each project area during construction. Where possible, traffic would continue to use the present highway as the new facility is being constructed. When the new alignment is completed, traffic would be diverted to the new alignment and the existing road would be rebuilt.*
- *MDT would ensure that access to properties adjacent to the highway is maintained throughout the construction period.*
- *Adjoining local streets would be used as detours during the proposed reconstruction of the route through the Town of Broadus.*
- *Delays to traffic during construction would be minimized.*

4. Social Impacts/Environmental Justice

Impacts of the Preferred Alternative. Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority and Low-Income Populations*, signed by President Clinton in 1994, has been observed for this proposed project. This proposed action would not have any significant impact on the location, distribution, density or growth rate of the population of the Broadus area or Powder River County. The proposed highway reconstruction projects would not adversely affect any social or ethnic groups and it would not isolate or divide existing residential areas. This alternative would not cause disproportionately high adverse human health or environmental effects on minority and low-income populations. The proposed projects would also comply with the provisions of *TITLE VI* of the *CIVIL RIGHTS ACT* (**42 U.S.C. 2000d**, as amended) under the FHWA's regulations (23 CFR 200).

Cumulative Impacts. The planned highway improvements would not result in any cumulative effects on the overall population of the project area or any particular social or ethnic groups. As indicated previously, Broadus and surrounding areas have not experienced population growth for several decades. Improving highway facilities in area would not, by itself, cause increases in population or encourage new development. Reconstructing the major portions of the state highway system in Powder River County and adjoining counties would likely result in temporary fluctuations in population as construction workers migrate in and out of the area over the next five to ten years. It is impossible to predict with any accuracy all reasonably foreseeable secondary and cumulative effects of future highway projects and other potential developments on population growth and the social structure in this region of Montana.

Impacts of the No Build Alternative. This alternative would not require the acquisition of land and would not displace households, businesses, or other areas used for human activities. Taking no action would not influence population growth or distribution in or near the project area.

5. Economic Impacts

Impacts of the Preferred Alternative. The proposed project would improve the quality of travel on an important interstate freight transportation route and travel corridor. Improvement of the route could result in increased travel within the corridor, particularly by commercial transporters. This could indirectly benefit the local economy, as additional highway users would have the opportunity to stop in of Broadus to purchase goods and services.

Improved safety for road users would decrease the potential for serious motor vehicle accidents. The associated economic costs associated with treating victims of fatal and injury accidents would be decreased accordingly.

Temporary jobs would be created during the construction of the Epsie NHS Corridor projects. Also, the demand for local goods and services (food, lodging, recreation, etc.) would be increased in Broadus due to the presence of workers temporarily living in the NHS Corridor during the construction of each project. These beneficial economic impacts would be sustained over several years as these highway construction projects are successively implemented. Local spending by workers during road construction activities may cause a slight increase in the local tax revenues.

This impact would likely be small and short-term.

The Preferred Alternative would require about 138.8 ha (342.3 acres) of new right-of-way from adjacent landowners. Right-of-way acquisition would permanently remove this minor amount of property from the tax rolls and taxes paid on the land would be lost to Powder River County. This loss in property tax revenue would have a negligible effect on revenues for the County and would likely be offset since abandoned sections of road and right-of-way would revert to adjacent landowners upon the completion of the proposed projects.

The proposed highway projects would not adversely affect or cause notable long-term changes to the economy of Powder River County or the Town of Broadus. There would be no commercial relocations or no land acquisitions that would affect the viability of agricultural operations or commercial businesses within the corridor.

Cumulative Impacts. Improving highway facilities into and out of Broadus may result in long-term benefits to some local businesses as motorists or commercial haulers who formerly avoided travel within the Epsie NHS Corridor due to deteriorated road conditions return to the route. This, together with the expected traffic growth on U.S. Highway 212 and Montana Highway 59 in the future, may result in more motorists stopping in Broadus to patronize highway-oriented businesses like truck stops, convenience stores, gas stations, and restaurants. Existing establishments should have the ability to easily absorb any increases in business.

As indicated above, beneficial economic impacts to Broadus and Powder River County would likely result as the Epsie NHS Corridor projects and others on U.S. Highway 212 and Montana Highway 59 are successively implemented over the next five to ten years. Road reconstruction in the area may increase the demand for local goods and services (food, lodging, recreation, etc.) during the construction period for each highway project. Local businesses would likely be able to meet such demands for goods and services.

Impacts of the No Build Alternative. This alternative would not change economic conditions or cause any new economic impacts to residents or businesses in the project area. MDT would still be obligated to budget funds to maintain the existing facility or perform spot improvements.

Mitigating Measures. The following measures would be implemented to minimize economic impacts of the proposed projects:

- *The time required for employing detours in Broadus would be minimized.*
- *Access to agricultural lands adjacent to the projects and businesses located within Town of Broadus would be perpetuated during the reconstruction of the highway.*

6. Hazardous/Materials Substances Impacts

Impacts of the Preferred Alternative. MDT has reviewed the potential for the presence of hazardous wastes, particularly petroleum hydrocarbon contamination associated with gas stations, in the Epsie NHS Corridor. Ten incidences of leaking underground storage tanks have been documented since 1989. Investigations by MDT indicate that construction of the proposed highway improvements should not affect any areas of known contamination, including a spill site at a gas station near the intersection of Park and Holt in the Town of Broadus.

The only known source of hazardous wastes for these proposed projects are associated with the equipment used for construction of the new roadway and its related features. These are the fuels, lubricants, hydraulic fluids, and related items needed for the contractor's vehicles and equipment. A slight risk of the release of these hazardous fluids exists since vehicles and heavy equipment would be operating within the project areas throughout the construction period.

Special provisions for salvaging and disposing of any treated timbers from the Cottonwood Creek bridge or other structures associated with the roadway would be included in the contract plans for the project. Disposal of non-salvageable and left-over materials would be in accordance with all applicable laws, rules, and regulations, including the *MONTANA SOLID WASTE MANAGEMENT ACT*.

Cumulative Impacts. The cumulative impacts of the generation and handling of hazardous materials for the proposed Epsie NHS Corridor projects together with other developments in the project area would be negligible. This conclusion was made due to the undeveloped nature of lands and the general absence of hazardous materials in rural portions of Powder River County and adjoining areas.

Impacts of the No Build Alternative. This alternative would have no impacts on hazardous waste sites, generators, or substances. A low potential for the release of hazardous fluids exists since MDT would operate trucks and other heavy equipment during the performance of required road maintenance activities.

Mitigating Measures. The following measures would be implemented to minimize hazardous waste impacts of the proposed projects:

- *The contractors for the projects would be required to store fuel and other hazardous materials away from surface waters and wetlands to reduce the potential adverse effects of an accidental spill.*

- *The contractors for the projects would be required to plan for and implement containment procedures in response to any accidental spills of fuel or other hazardous materials.*

7. Impacts to Cultural, Archaeological/Historical Resources

Impacts of the Preferred Alternative. Cultural resource surveys performed for the proposed projects indicate that three cultural sites eligible for the *National Register of Historic Places* (NRHP) exist within the Epsie NHS Corridor. These sites include:

24PR1793/1807 - Pumpkin Creek Prehistoric Site
24 PR1944 - Historic Site ("Judge's Chambers")

24 PR1949 - Historic Site (Ned's Antiques)

The Epsie-East & West project would affect the 24PR1793/1807. The site occurs on the west side of Pumpkin Creek on both sides of U.S. Highway 212 and consists of a widely distributed cultural material scatter and intact buried cultural deposits including a number of heat-altered rock features. The majority of the 9.7 ha (24.0 acre) site is situated within the historic floodplain of Pumpkin Creek and much of the site south of the existing highway occurs on undisturbed lands. Lands within the site north of the highway have been cultivated. The most important finds to date have been made in the southwestern portion of the site.

The proposed Epsie East & West project would shift the road northward so the centerline for the new road is at the north edge of the present pavement. Preliminary plans for the new road indicate that most new highway construction would occur within the existing right-of-way (much of which has already been disturbed) for the highway. MDT's preliminary plans show that an area at the eastern edge of 24PR1793/1807 totaling about 0.36 ha (0.89 acres) would be needed as new right-of-way for the highway. The proposed highway improvements would disturb less than half of the area needed for new right-of-way within the Pumpkin Creek site.

Subsurface archaeological testing was performed during October 2001 to determine the potential effects of reconstructing U.S. Highway 212 on the Pumpkin Creek site. Testing failed to identify any significant cultural materials and MDT's consulting archaeologist recommended that the impacted portion of the site does not contribute to the significance of 24PR1793/1807. These findings support a "no effect" determination by MDT. However, MDT will seek concurrence from SHPO for this Determination of Effect when a report detailing the results of site testing is completed in November 2001.

Sites 24PR1944 and 24PR1949 are located in the Town of Broadus within the Broadus-East project area. The Preferred Alternative would not require any new right-of-way from the lots housing 24PR1944 or 24PR1949. The Broadus-East project would provide a slightly wider roadway with curbs and gutters adjacent to each of these historic sites. However, the proposed highway improvements would not adversely affect any of the features or the setting that makes these historic structures eligible for the NRHP.

The existing Cottonwood Creek Bridge, a timber structure built in 1939, is covered under MDT's historic roads and bridge Programmatic Agreement with the FHWA, the Montana SHPO, and the Advisory Council on Historic Preservation (ACHP). As such, there is no need to evaluate, assess, and mitigate the proposed action's effects on this structure. The Programmatic Agreement was enacted in lieu of regular procedures for compliance with the Section 1-6 of the *National Historic Preservation Act* (**16 U.S.C. 470f**) as applied only to historic roads and bridges in Montana.

Federally-funded actions affecting historic sites that are on, or considered as eligible for the NRHP also must comply with *Section 4(f)* of the *U.S. DEPARTMENT OF TRANSPORTATION Act* of 1966, as amended (**49 U.S.C. 303**). This compliance is discussed later in this Part.

Cumulative Impacts. The likelihood for encountering cultural materials increases as new lands are disturbed by the Epsie NHS Corridor projects and other ongoing and future developments in the area.

Impacts of the No Build Alternative. The No Build Alternative would not cause any further effects on the cultural resources in the Epsie NHS Corridor.

Mitigating Measures. The following measures would be implemented to minimize potential impacts on cultural resources due to implementation of the proposed projects:

- *The proposed projects would be coordinated with the Montana SHPO and ACHP (if necessary) to ensure that appropriate protection is afforded to cultural resources in the Epsie NHS Corridor.*
- *If unanticipated cultural materials were encountered during construction, MDT would require the contractor(s) to temporarily suspend work in the immediate vicinity of the find until the significance of the cultural materials can be assessed.*

8. *Section 4(f)* Impacts

Impacts of the Preferred Alternative. *Section 4(f)* of the *U.S. DEPARTMENT OF TRANSPORTATION Act*, as amended, applies to Federally-funded transportation actions that affect sites on or eligible for the NRHP, publicly-owned parks, recreation lands, and wildlife and waterfowl refuges. The proposed action would not affect any public parks, recreation lands, or wildlife or waterfowl refuges.

As indicated previously, the proposed Epsie-East & West project would affect the NRHP-eligible Pumpkin Creek Site (24PR1793/1807). *Section 4(f)* applies to all archaeological sites on or eligible for inclusion on the NRHP and which warrant preservation in place (including those discovered during construction). *Section 4(f)* does not apply if FHWA, after consultation with the SHPO and the ACHP, determines that the archaeological resource is important chiefly because of what can be learned by data recovery (even if it is agreed not to recover the resource) and has minimal value for preservation in place.

MDT prepared a "Nationwide" Programmatic *Section 4(f)* Evaluation form for the Pumpkin Creek site because the Epsie-East & West project would result in minor effects to the NRHP-eligible archeological site. The word minor is narrowly defined as having either a "no effect" or "no adverse effect" (when applying the requirements of *Section 106* of the *National Historic Preservation Act* and 36 CFR Part 800) on the qualities that make the site eligible for the NRHP. Subsurface testing in the portion of the Pumpkin Creek site impacted by the proposed highway reconstruction shows there would be "no effect" to the archaeological site. A copy of the form can be found in **APPENDIX D**. A copy of the FHWA Programmatic Memorandum of Agreement for minor involvements with historic sites can also be found in the same appendix.

Cumulative Impacts. The potential for encountering *Section 4(f)* properties (principally archaeological or historic sites) increases as highway improvement projects disturb new lands along the U.S. Highway 212 and Montana Highway 59 corridors. *Section 4(f)* requires that planning to identify alternatives that would not require the use of such properties and to minimize harm to the properties should adverse effects be unavoidable.

Impacts of the No Build Alternative. This alternative would not cause any new effects to sites on or eligible for the NRHP, publicly-owned parks, recreation lands, or wildlife and waterfowl refuges.

9. *Section 6(f)* Impacts

Section 6(f) of the *NATIONAL LAND & WATER CONSERVATION FUND ACT* (**16 U.S.C. 460**) requires that coordination be done to determine if federal funds were used to acquire or improve any lands in the project area for recreation or water conservation purposes.

As indicated in Part IV, the Powder River Golf Course is the only site within the Epsie NHS Corridor that that was acquired or developed with federal monies from the Land and Water Conservation Fund. Neither the Preferred Alternative nor the No Build Alternative would require any land from or otherwise affect the Powder River Golf Course.

10. Visual Impacts

Impacts of the Preferred Alternative. The Preferred Alternative would not change views of the background landscapes. However, this alternative would cause minor changes to the foreground landscape of the Epsie NHS Corridor. The width of the new roadway would be notably greater than that of the existing facility due to its increased pavement width and expanded right-of-way and clear zone areas.

Permanent visual changes within the Epsie NHS Corridor would be most apparent within the Town of Broadus. Users of the facility and local residents would notice the provision of concrete pavement instead of asphalt surfacing and new traffic controls at the intersection of Park and Holt. The addition of curb and gutters, storm drains, sidewalks and addition sections of paved walkway/bike path along the roadway in Broadus would also be obvious changes to the appearance of the community.

The shift in the road's location in the vicinity of the Little Powder River Realignment would cause minor changes in the views of foreground and background landscapes. The view of the new road would also be changed for the residents of a ranch house near the eastern end of the proposed realignment since the road would be shifted further away from the residence.

The Preferred Alternative would cause minor, short-term visual impacts during the construction period. Visual changes during construction would include: surface disturbances and clearing until revegetation occurs; temporary sign installations; the storage of excavated material, equipment, and material; and dust and debris from construction activities.

Cumulative Impacts. The implementation of MDT's numerous highway projects over the next five to ten years would subject motorists to views of disturbed lands within the U.S. Highway 212 and Montana Highway 59 corridors. This impact would be temporary and last until revegetation succeeds in each project area.

Impacts of the No Build Alternative. There would be no new visual impacts associated with the No Build Alternative.

Mitigating Measures. The following measures would be incorporated with the proposed Epsie NHS Corridor projects to offset potential visual impacts:

- *Disturbed areas would be reseeded as quickly as possible after construction.*

- *Portions of the existing road that could not be incorporated into the foundation for the new roadway would be obliterated. The ground would be contoured to match the existing terrain in areas where the old road is obliterated.*

11. Considerations Relating to Pedestrians and Bicyclists

Impacts of the Preferred Alternative. The Preferred Alternative would provide slightly wider road shoulders for use by pedestrians and bicyclists. The proposed road would typically have 1.8 m (5.9 feet) wide shoulders in rural portions of the corridor as compared to the minimal to 0.6 m (2.0 feet) wide shoulders that presently exist through much of the NHS corridor. The additional shoulder area would increase safety for pedestrians and bicyclists electing to travel through the area.

The Preferred Alternative would also include rumble strips on each shoulder. Rumble strips are typically provided to alert motorists that they are wandering out of travel lanes and onto the shoulder. The surface depressions associated with rumble strips can be uncomfortable for bicyclists to negotiate, particularly if the features were constructed across most of the width of the paved shoulder. The Preferred Alternative would provide 0.3 m (1.0 foot) wide rumble strips. Depending upon the project area, between 1.5 and 1.8 m (4.9 and 6.2 feet) of paved shoulder area would be available for use by bicyclists in the Epsie NHS Corridor. Bicyclists should be able to easily traverse the shoulder of the new road without encountering rumble strips.

New sidewalk would also be built along the south side of Holt Street (beginning near Jensen Avenue) and along the west side of Park Avenue (ending near Cottonwood Street).
An existing walkway/bike path west of Broadus along the south side of the road would be affected by construction of the proposed Broadus-East project. The walkway extends from the Tastee Freeze restaurant westerly to an existing commercial/residential area. The walkway and associated lighting would be relocated to accommodate the proposed road widening. MDT would reestablish this 698 m (2,290± feet) long section of walk/bike path along the south side of the highway adjacent to the right-of-way line. The walkway and lights would be reconstructed further to the south, adjacent to the new south right-of-way line for U.S. Highway 212.

Additionally, a section of walk/bike path would be built along the west side of the highway south of Cottonwood Street. The path would begin where the proposed sidewalk ends along Park Avenue and continue 630 m (2,067± feet) south to the edge of the community's developed commercial area. The bike path would have a 1.8 m (5.9± feet) wide plant mix surface and would be separated from the roadway.

Powder River County plans to construct a bike/pedestrian path from Sullivan Street southeasterly to the Powder River. The new path would be located adjacent to the existing west right-of-way line for U.S. Highway 212 in the southeast part of Broadus. The new path would be designed into the proposed Broadus-East project but would be funded with Community Transportation Enhancement Program (CTEP) funds.

Cumulative Impacts. The implementation of the Epsie NHS Corridor projects, as well as other recently completed, ongoing, or future highway improvement projects on adjoining sections of U.S. Highway 212 and Montana Highway 59 would provide wider shoulders and enhance safety for bicyclists and pedestrians passing through the area. It is also possible that MDT's Broadus-East project (which includes a walk/bike path) could encourage Powder River County to complete its planned CTEP project concurrent with or shortly after completion of the proposed highway project.

Impacts of the No Build Alternative - There would be no change in the facilities available for use by bicyclists or pedestrians with the No Build Alternative.

12. Other Secondary and Cumulative Impacts

Secondary (or indirect) effects are those that are caused by an action and are later in time or farther removed in distance but are still reasonably foreseeable. Secondary impacts are generally induced by the initial action and comprise a wide variety of effects such as, changes in land use, water quality, economic conditions, or population density. The secondary impacts of this proposed project are addressed in appropriate sections of this Part.

Cumulative impacts are those effects that result from the incremental consequences of an action when added to other past and reasonably foreseeable future actions regardless of what agency (federal or non-federal) undertakes such actions.

Projects under construction, planned, or recently completed by MDT and others in the vicinity were reviewed to help assess the cumulative impacts of this project. MDT currently has four active projects and three planned projects on U.S. Highway 212 or Highway 59 within 96 km (60 miles) of Broadus, not including the proposed Epsie NHS Corridor projects. These active and planned projects are described below:

- **Coalwood-South; NH 23-2(20) 56F; Control No. 1824** - an active reconstruction project on 13.20 km (8.2 miles) of Montana Highway 59 between Broadus and Miles City. The project should be completed by July 30, 2002. This project begins about 23.6 km (14.7 miles) north of Broadus.

- **Olive-N & S; NH 23-2 (18) 64; Control No. 1823** - an active reconstruction project on 19.63 km (12.19 miles) of Montana Highway 59 between Broadus and Miles City. The project is scheduled for completion by July 30, 2002. This project begins at the intersection of U.S. Highway 212 and Montana Highway 59 about 4 km (2.5 miles) northwest of Broadus.

- **Coalwood-North; NH 23-1(19) 48F; Control No. 1824** - an active reconstruction project on 13.36 km (8.3 miles) of Montana Highway 59 between Broadus and Miles City. The project was let in March 2001 and should be completed by July 30, 2002. This project is located about 38.6 km (22.9 miles) north of Broadus.

- **Alzada - East & West; NH 23-3 (10) 130;Control No. 1514** - an active reconstruction project on 15.45 km (14.7 miles) of U.S. Highway 212 between Broadus and Alzada. The project was let to bid in May 2001 and should be completed by June 2002. This project occurs about 91 km (57 miles) southeast of Broadus.

- **Volberg-North & South; NH 23-1(27) 33F; Control No. 1514** - a planned reconstruction project on 23.66 km (14.7 miles) of Montana Highway 59 between Broadus and Miles City. The project has a current ready date of March 2002 and should be let during June 2002. This project begins about 50 km (31.2 miles) north of Broadus and would take place primarily in Custer County.

- **Ashland – East, NH 37-2(24) 63; Control No. 4338** - a planned reconstruction project on 23.7 km (14.7 miles) of U.S. Highway 212 east of Ashland. A ready date has not been established for his project, but MDT anticipates the project would be let to contract in 2006. The project would be located about 48 km (35 miles) west of Broadus in Rosebud County and Powder River County.

- **Ashland - West; SFCN 37-2(20)55; Control No. 4110** - a planned project to crack seal 12.1 km (7.5 miles) of U.S. Highway 212 west of Ashland. Although a firm ready date and letting date have not been established, the project would likely be let in spring or early summer of 2003. The project would be located about 71 km (44 miles) west of Broadus in Rosebud County.

- **2 km North of Biddle** - a planned pavement preservation project on 16.7 km (10.4 miles) of Montana Highway 59 north of Biddle. The project would place a new plant mix overlay with seal and cover on the roadway, upgrade guardrails, and complete minor shoulder work. The project has a scheduled ready date of July 2002. The work would likely be completed during spring or early summer 2003. Biddle is 41.8 km (26 miles) southeast of Broadus.

MDT is also considering additional improvements in the future on U.S. Highway 212 and on Montana Highway 59 in or near Powder River County. The following projects are under consideration but have not yet been nominated or programmed for implementation.

32 km South of Miles City - South -- (Montana Highway 59 - major widening)
Biddle-North & South -- (Montana Highway 59 - reconstruction)
Hammond-South -- (U.S. Highway 212 - reconstruction)

Currently, MDT plans for construction of the proposed Broadus-East project to begin during Fiscal Year 2002 and for the Epsie-East & West project to be initiated in Fiscal Year 2003. The Epsie-East project would be constructed in Fiscal Year 2004 or beyond.

A review of these active and planned highway projects on U.S. Highway 212 or Montana Highway 59 in the Broadus area shows that the four active projects would be completed prior to construction of the Epsie NHS Corridor projects. The planned Volberg-North & South reconstruction project in neighboring Custer County and two pavement preservation/maintenance projects (Ashland-West and 2 km North of Biddle) may occur when the Broadus-East project is under construction. However, none of these projects would be located closer than about 40 km (25 miles) from the Broadus-East project area. The Ashland-East project would likely be built after all three of the Epsie NHS Corridor projects are completed.

The planned implementation of MDT's Epsie NHS Corridor projects, together with other active and planned projects on U.S. Highway 212 or Montana Highway 59, suggest that highway-related work would take place in the Broadus area and other portions of Powder River County during each construction season in the 2001-2007 period. Major reconstruction projects would not occur simultaneously in the Broadus area, although project completion could coincide with start-up activities for successive Epsie NHS Corridor projects. Motorists on both U.S. Highway 212 and Highway 59 would likely experience temporary delays or detours due to construction at one time or another over the next several years. New right-of-way would be acquired with many of the planned projects and lands within each project area would be disturbed during construction creating temporary environmental impacts. The end result of these highway projects would be a substantially improved transportation system in Powder River, Custer, and Rosebud Counties.

Because MDT's other active and planned reconstruction projects are not contiguous with the proposed work areas within the Epsie NHS Corridor and would not generally occur at the same time, the cumulative environmental impacts of these projects on the proposed Epsie NHS Corridor projects would be minor. Similarly, the proposed improvements within the Epsie NHS Corridor would not be expected to produce any significant cumulative environmental impacts on other proposed projects in MDT's Glendive District.

The proposed improvement projects on U.S. Highway 212 and Montana Highway 59 in the Broadus area are not "connected actions" as discussed in 40 CFR §1508.25 (Scope) of the *COUNCIL ON ENVIRONMENTAL QUALITY* (CEQ) Regulations. According to §1508.25 (a) (1) of the CEQ Regulations, actions are connected if they:

1) automatically trigger other actions which may require environmental impact statements (or assessments);
2) cannot or will not proceed unless other actions are taken previously or simultaneously; or
3) are interdependent parts of a larger action and depend on the larger action for their justification.

The CEQ Regulations indicate that if any of these conditions are met, "connected actions" exist and the closely related actions must be discussed in the same impact document.

Although these projects occur in the same general area of southeastern Montana and would be implemented within five years of each other, the planning, design, and construction of each project could proceed (and in many instances has proceeded) independently. Implementing the

Epsie NHS Corridor projects would not trigger the need for improvements to other adjoining segments of the road system in the Broadus area. Likewise, implementation of other road projects within Powder River, Custer, or Rosebud Counties would not require that the Epsie NHS Corridor be rebuilt.

MDT would continue to coordinate future projects with the public and other appropriate agencies, complete a review of potential impacts to the environment, and identify requirements for mitigation of any adverse effects as projects are developed and implemented.

The Powder River Basin of Montana and Wyoming is presently an area of intense interest for energy development and production due to an abundance of coal and the large reserves of methane gas within the Basin's coal beds. According to an "Issue Paper" discussing coal bed methane production in Montana prepared by the MDEQ in January 2001, coal bed methane wells currently provide about 5% of the nation's natural gas supply and could eventually provide as much as 12% of the natural gas supply. The MDEQ document indicates that about 8,000 coal bed methane wells are currently extracting gas in the United States with almost half of the existing wells being in Wyoming.

Efforts to develop this energy resource within Montana have begun and areas west and southwest of Broadus have been identified as possible sites for coal bed methane development. The MDEQ indicates that the portion of the Powder River Basin within Montana contains an estimated 5-10% of the Basin's projected coal bed methane gas reserves. MDEQ also indicates that according to industry sources, as many as 10,000 coal bed methane wells could be drilled in the Montana portion of the Powder River Basin over the next ten years, in addition to an unspecified number of conventional oil and gas wells. Information from the Montana Board of Oil and Gas Conservation (BOGC) showed that as of November 2000, applications had been received to drill 210 exploratory coal bed methane wells including 79 proposed wells in Powder River County.

Coal bed methane development in the region presents a number of natural resource concerns since the gas is typically extracted through surface wells. The wells pump and discharge large quantities of water to lower the hydrostatic pressure in the coal seam to enable the gas to escape to the surface. The extensive development of coal bed methane resources and oil and gas wells in the Powder River Basin could have notable effects to the natural environment and on communities, like Broadus, located within the Basin.

For these reasons, the BLM, the MDEQ, and the BOGC are jointly preparing an Oil and Gas Resource Management Plan (RMP) Amendment and Environmental Impact Statement (EIS). The EIS will address oil and gas development on BLM-administered within the agency's Powder River and Billings RMP areas and potential coal bed methane development areas around the state. The Powder River RMP area consists of Treasure, Rosebud, Powder River, Carter, and portions of Custer and Big Horn counties. The RMP Amendment and EIS will guide BLM's oil and gas decisions and help the State evaluate effects of further oil and gas permit applications.

The Draft EIS and RMP Amendment are scheduled for completion by September 2001. The Final EIS and Proposed RMP Amendment should be done in March 2002. Energy exploration and subsequent development could cause changes in traffic volumes and vehicle composition within the Epsie NHS Corridor and on other roads within the County. It is anticipated that the forthcoming EIS documents would disclose these and other potential effects of coal bed methane development in Powder River County.

It appears that any development or population growth in the area may occur whether or not the projects addressed in this document are built. Future growth would likely be driven by factors other than improving the existing highway system in the Broadus area. Such factors are primarily related to the natural resource industry, the national and global economy, and the price of energy. The projects discussed herein would not induce any growth in the project area.

Further, there is no guarantee that there would be development in the Broadus area, or if there is, when such growth might occur. For these reasons, it is impossible to predict what types of impacts might occur. It is certain though, that such development would occur independently of the road projects proposed for Broadus and Powder River County.

13. Construction Impacts

Impacts of the Preferred Alternative. Road reconstruction activities associated with the Preferred Alternative would cause temporary inconveniences to the traveling public and to local residents. These inconveniences may include slightly longer travel times, minor detours and temporary closures of portions of the road, and the noise and dust generated by construction equipment. These impacts could be expected periodically over the estimated 12 to 18 months (or two construction seasons) required to build each project within the Epsie NHS Corridor.
There are several impacts associated with the construction of improvements for the Preferred Alternative. These construction-related impacts are described below:

- **Noise and Vibration.** The operations of heavy machinery like earth moving equipment, paving equipment, power tools, and trucks would create periods of undesirable noise in the project area. Noise due to construction activities would produce short-term impacts for residents and business owners near the highway. Construction-related noise may also temporarily displace some wildlife and bird species from the area or deter such species from using habitats in the vicinity of the roadway.

- **Dust.** The operation of heavy equipment on disturbed areas could produce dust.

- **Water Quality.** Runoff from disturbed surface areas has a minor potential to enter surface waters and adversely affect water quality. Petroleum products and other materials could be spilled during the operation and maintenance of equipment needed to build the new highway facilities.

- **Visual.** Stockpiles of materials and equipment needed for the construction of the new bridge and roadway may cause short-term adverse impacts for local residents and others passing through the project area.

- **Traffic.** Few, if any, disruptions to traffic are anticipated since the existing road would remain in use during the construction period. Detours would be needed to maintain traffic flows around work zones in Broadus.

At the present time, no borrow source(s) for road fill material needed for construction of the proposed projects has been identified. The contractor(s) selected for the proposed projects must identify and develop any necessary borrow sources and truck the needed material to the work zones. This would cause a minor increase in truck traffic on U.S. Highway 212, Montana Highway 59, and any other roads used for travel to and from the borrow area.

Mitigating Measures. Construction impacts would be mitigated through the implementation and enforcement of control measures during construction. Such measures would include:

- *The contractor would be subject to all state and local laws to minimize construction noise by having mufflers on all equipment.*
- *Dust generated through construction activities and road use would be controlled by the required use of either water or another approved dust suppressant.*
- *Erosion control measures would be employed to prevent sediments from reaching the area surface waters or wetlands.*
- *Temporary or permanent seeding and mulching would be used to control erosion of disturbed areas.*
- *The contractor(s) would be required to have plan for implementing appropriate measures in the event of an accidental spill.*

All work related to the proposed Epsie NHS Corridor projects would be subject to the provisions included in the current edition of *Standard Specifications for Road and Bridge Construction* as adopted by MDT and the Montana Transportation Commission.

Impacts of the No Build Alternative - The only construction impacts associated with this alternative would be related to the completion of minor maintenance activities on the existing roadway and its related facilities.

14. Permits Required

The No Build Alternative would not require any permits. However, the Preferred Alternative for the proposed Epsie NHS Corridor projects would require the following permits to be obtained prior to any relevant disturbances:

- ***Section 3(a)* Authorization/*124SPA*.** The proposed projects would be in compliance with the provisions of both Water Quality for *Section 3(a)* authorizations under **75-5-401** (2) **M.C.A.** and Stream Protection under (**87-5-501** through **509 M.C.A.**, inclusive).

  A ***124SPA*** Stream Protection Permit is required by the MDFWP.

All work would also be in accordance with the *WATER QUALITY ACT OF 1987* **(P.L. 100-4)**, as amended.

- ***Section 402* Permit.** The Epsie NHS Corridor projects would be in compliance with the CLEAN WATER ACT **(33 U.S.C. 1251 - 1376)** - *Section 402*/Montana Pollutant Discharge Elimination System. Accordingly, MDT would notify the MDEQ of the intent for the proposed projects to be covered under the General Permit for storm water discharges associated with construction activity.

- ***Section 404* Permit.** A *CLEAN WATER ACT* **(33 U.S.C. 1251 - 1376)** - *Section 404* permit from the COE would be required for placing fill in wetlands or for the discharge of dredged or fill material associated with culvert replacements. The COE would determine if the proposed projects qualify for "Nationwide" permits under the provisions of 33 CFR 330.

- **Floodplain Development Permit.** A Floodplain Development Permit would be required from Powder River County for the proposed work in the delineated floodplain of Cottonwood Creek within the Broadus-East project area.

VI. Coordination with Others

VI. COORDINATION WITH OTHERS

This Part summarizes efforts undertaken by MDT to communicate with the agencies and the public about the proposed highway improvements within the Epsie NHS Corridor. The specific objectives of the activities performed to coordinate these projects with the public and agencies with potential interests are to:

- identify and include people, groups, and agencies that may be affected;
- provide opportunities for interested parties to express their views, ideas, and concerns about the project;
- ensure that interested parties receive understandable project; and
- make it apparent to interested parties that their opinions and ideas have been considered during the development of the project.

A. Agency Coordination

1. Cooperating Agencies

Requests to be Cooperating Agencies are typically issued to agencies with jurisdiction or special expertise early in the project under the provisions of 23 CFR 771.111(d). The U.S. DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT (BLM) and Montana DEPARTMENT OF NATURAL RESOURCES AND CONSERVATION (DNRC) have jurisdiction over and manage land uses and activities on federal and state lands in the Epsie NHS Corridor. MDT requested these agencies to be Cooperating Agencies for the Epsie NHS Corridor projects in February 2000. Both agencies expressed their willingness to participate in the development of these proposed highway projects. Letters received in response to MDT's requests can be found in **APPENDIX B**.

MDT will extend invitations to representatives of these Cooperating Agencies to attend field reviews, public meetings, and other important project meetings. The agencies will also be afforded opportunities to review and comment on preliminary design plans for the proposed corridor projects. The BLM and DNRC were also provided with "rough draft" versions of this Environmental Assessment for review and comment. Relevant comments and necessary changes submitted by these agencies have been incorporated into the text of this document.

2. Agencies Consulted

The following agencies and parties were consulted during the development of this Environmental Assessment:

- U.S. Department of Agriculture, Natural Resources Conservation Service
- U.S. Fish and Wildlife Service
- Federal Highway Administration (Montana Division Office)
- U.S. Department of the Army, Corps of Engineers
- Montana Department of Fish, Wildlife & Parks
- Montana State Historic Preservation Office
- Montana Department of Environmental Quality (Permitting and Compliance Division)

- Natural Heritage Program, Montana State Library
- Powder River County
- Town of Broadus

B. Public Involvement

1. Project News Releases

Public involvement efforts for the Epsie NHS Corridor projects are discussed individually in the paragraphs below. MDT's news releases are typically made available to area newspapers and radio and television stations.

- **Epsie- East & West.** Authorization from the FHWA to begin preliminary engineering work on this project was received in June 1992. MDT initially prepared and distributed a news release announcing its intentions to improve U.S. Highway 212 in October 1992. The news release indicated MDT's planned improvements to this section of highway and requested comments from the public. A second news release was issued in May 1999.

- **Epsie-East.** MDT distributed a news release discussing the proposed improvements to U.S. Highway 212 in the Epsie area on April 25, 1999.

- **Broadus-East.** MDT initially distributed a news release about the planned improvements to U.S. Highway 212 and Montana Highway 59 in the early 1990s during its work on the Broadus-Urban and Broadus-East projects. A second news release about the project was issued in May 1999.

During 1995 and 1996, MDT's Glendive District Administrators granted interviews to the local media and used the opportunities to update the public on the status of projects in the Broadus area. Copies of newspaper articles that appeared in the Powder River Chronicle at these times can be viewed in **APPENDIX C**.

2. Public Meetings Held on the Proposed Projects

No public meetings have been held to date for the Epsie-East & West or Epsie-East projects. However, a public information meeting about the Broadus-East project was held on December 11, 1996 at the MDFWP Building in Miles City. The public information meeting was used to advise the public of the proposed scope of work for the project.

An informal meeting between local residents and staff from MDT's Glendive District occurred in Broadus on January 26, 1993. The meeting was used to solicit comments on issues or concerns that should be considered in the development of the Broadus-East project.

3. Planned Public Involvement Activities

A Notice of Availability for the Environmental Assessment and an Opportunity for a Public Hearing on the Epsie NHS Corridor projects will be mailed to all parties on the mailing list and advertised in local newspapers following FHWA's approval of this document. Written comments on the Environmental Assessment will be received for at least thirty (30) days following its distribution. Public and agency comments on this document will be evaluated to determine: 1) whether significant impacts will occur from the implementation of the Preferred Alternative; 2) if further consideration of the impacts discussed herein is needed; and 3) if new issues have arisen that must be addressed in the Environmental Assessment. After the close of the official comment period, revisions will be made to the text of the Environmental Assessment where warranted by the comments received. Unless comments received on the document warrant further investigation, no additional public involvement is planned.

If no significant impacts are identified, MDT will submit a summary of comments received (if any) or a revised Environmental Assessment (if needed) to the FHWA and will request the agency to make a Finding of No Significant Impact (FONSI). The signed FONSI will then be attached to this document or to the revised Environmental Assessment. Federal, State, and local government agencies with interests in the projects and others on the mailing list will be notified of the availability of the FONSI and revised Environmental Assessment.

If significant impacts are found, then MDT and FHWA must determine if an Environmental Impact Statement (EIS) must be prepared to advance the proposed actions.

C. Distribution List for Document

The following agencies, groups, and individuals are being sent a copy of this Environmental Assessment:

AGENCIES WITH INTERESTS IN PROJECT

U.S. DEPARTMENT OF THE INTERIOR
Bureau of Land Management
Miles City Field Office
111 Garryowen Road
Miles City, MT 59301
Attn: Tim Murphy, Field Manager

U.S. DEPARTMENT OF THE INTERIOR
U.S. Fish & Wildlife Service
301 South Park, Box 10023
Helena, MT 59626
Attn: Scott Jackson

U.S. DEPARTMENT OF TRANSPORTATION
Federal Highway Administration
Montana Division Office
2880 Skyway Drive
Helena, MT 59602

DEPARTMENT OF NATURAL RESOURCES AND CONSERVATION
Eastern Land Office
P.O. Box 1794
Miles City, MT 59301-1794
Attn: Dwayne Andrews, Area Manager

MONTANA DEPARTMENT OF ENVIRONMENTAL QUALITY
P.O. Box 200901
Helena, Montana 59620-0901
Attn: Permitting and Compliance Division

MONTANA DEPARTMENT OF FISH, WILDLIFE & PARKS
1420 East Sixth Avenue
P.O. Box 200701
Helena, MT 59620-0701
Attn: Glenn Phillips, Fisheries Division

MONTANA DEPARTMENT OF FISH, WILDLIFE & PARKS
Headquarters Region 7
P.O. Box 1630
Miles City, MT 59301
Attn: Don Hyyppa, Regional Supervisor

STATE LIBRARY
Collection Management Librarian
1515 East Sixth Avenue
Helena, MT 59620-1800

ENVIRONMENTAL QUALITY COUNCIL
Office of the Director
Capitol Post Office Box 215
Helena, MT 59620

BOARD OF COUNTY COMMISSIONERS
Powder River County
P.O. Box 270
Broadus, MT 59317

POWDER RIVER COUNTY PLANNING BOARD
P.O. Box 270
Broadus, MT 59317

TOWN OF BROADUS
P.O. Box 659
Broadus, MT 59317
Attn: Milton Amsden, Mayor

T & C Smith Ranch, Inc.
HC 56, Box 35
Broadus, MT 59317

L. Craig and Dana O'Gordon
Broadus, MT 59317

Sampson Family Ranch, Inc.
% Emily Brownfield
HC 49, Box 14
Hammond, MT 59332

Frank P. & Virginia L. Robinson
Route 56
Broadus, MT 59317

Charles L. & Shirley E. Russell
Box 88
Broadus, MT 59317

D. List of Agencies With Jurisdiction and/or Permits Required

The following agencies have permit requirements applicable to the proposed Epsie NHS Corridor highway improvement projects:

U.S. Department of Interior, Bureau of Land Management - Easement for new highway construction across federal lands.

Department of Natural Resources and Conservation - Easement for new highway construction across state lands.

U.S. Department of the Army, Corps of Engineers (Regulatory Office) -- *Section 404* Permit for placing fill material associated with road construction in wetlands or "Waters of the U.S."

Montana Department of Fish, Wildlife & Parks - *124SPA* Permit as required under the *MONTANA STREAM PROTECTION ACT.*

Montana Department of Environmental Quality, Permitting and Compliance Division - Notice of intent to be covered by General Permit for storm water and pollution prevention plan in accordance with *Section 402*/Montana Pollutant Discharge Elimination System.

Powder River County - Floodplain Development Permit for the proposed work in the delineated floodplain of Cottonwood Creek within the Broadus-East project area.

E. List of Other Agencies, Persons, or Groups Contacted or Have Contributed Information

The agencies and individuals below were contacted for information useful to the preparation of this Environmental Assessment. Pertinent correspondence from some of these individuals has been included in **APPENDIX B**.

- Carol A. Hilliard, District Conservationist, Natural Resources and Conservation Service
- Powder River County Board of County Commissioners
- Milton Amsden, Mayor Town of Broadus
- Mary Ellen McDonald, Montana Department of Fish, Wildlife & Parks (Retired)
- Don Hyyppa, Montana Department of Fish, Wildlife & Parks, Region 7 Supervisor
- Bill Olsen (for R. Mark Wilson), U.S. Fish and Wildlife Service

Epsie NHS Corridor Projects
Epsie-East & West; STPP 37-3(6) 85
Epsie-East; NH 37-3(10) 96
Broadus-East; F 23-2(11) 78

Environmental Assessment

Appendices

Appendix A: List of Preparers

The following parties are responsible for the preparation and content of this document:

Joel M. Marshik, P.E.
Environmental Services Manager
Montana Department of Transportation
P.O. Box 201001
Helena, MT 59620-1001

Janice W. Brown, Division Administrator
Montana Division Office
Federal Highway Administration
2880 Skyway Drive
Helena, MT 59602

The following consultants assisted the Montana Department of Transportation coordinate, develop supporting information, and write this document:

Robert Peccia & Associates, Inc.
Consulting Civil Engineers, Planners and Designers
825 Custer Avenue
P.O. Box 5653
Helena, Montana 59604

Ethnoscience, Inc.
Cultural Resource Consultants
711 Rimrock
P.O. Box 30577
Billings, Montana 59107-0577

Aaberg Cultural Resource Consulting Service
Cultural Resource Consultants
712 West Broadway
Lewistown, Montana 59457

Historical Research Associates, Inc.
Cultural Resource Consultants
111 North Higgins, Suite 504
Missoula, MT 59802-4401

Western EcoSystems Technology, Inc.
Biological Resources and Wetlands Consultants
2003 Central Avenue
Cheyenne, Wyoming 82001

Appendix B: Correspondence Pertinent to Project

U.S. Department of Agriculture

FARMLAND CONVERSION IMPACT RATING

PART I *(To be completed by Federal Agency)*	Date of Land Evaluation Request **February 7, 2001**
Name of Project **EPSIE NHS CORRIDOR PROJECTS** **Epsie-East & West; STPP 37-3(6) 85; Control No. 2149** **Epsie-East; NH 37-3(10) 96; Control No. 4056** **Broadus-East; F 23-2(11) 78; Control No.1517**	Federal Agency Involved **U.S. DOT Federal Highway Administration/** **Montana Department of Transportation**
Proposed Land Use **Road Reconstruction and New R/W**	County and State **Powder River County, Montana**
PART II *(To be completed by SCS)*	Date Request Received by SCS

Does the site contain prime, unique, statewide or local important farmland? *(If no, the FPPA does not apply - do not complete additional parts of this form).*	Yes ☒ No ☐	Acres Irrigated	Average Farm Size
Major Crop*(s)*	Farmable Land in Govt. Jurisdiction Acres: %	Amount of Farmland As Defined in FPPA Acres: %	
Name of Land Evaluation System Used	Name of Local Site Assessment System	Date Land Evaluation Returned by SCS	

		Alternative Site Rating		
PART III *(To be completed by Federal Agency)* Land Evaluation Information **TOTALS PRESENTED ARE COMBINED FOR ALL 3 PROJECTS**		Proposed Action	Proposed Action Without Little Powder River Realignment	Existing Highway (No-Action)
A. Total Acres To Be Converted Directly (Area of farmland within new R/W)		133.8	118.6	0.0
B. Total Acres To Be Converted Indirectly (Area of farmland within new R/W)		0.0	0.0	0.0
C. Total Acres in Site (Total Acres of New or Existing Right-of-Way)		342.3	304.8	667.5
PART IV *(To be completed by SCS)* Land Evaluation Information				
A. Total Acres Of Prime And Unique Farmland				
B. Total Acres Of Statewide or Local Important Farmland				
C. Percentage Of Farmland in County or Local Govt. Unit To Be Converted				
D. Percentage Of Farmland in Govt. Jurisdiction With Same Or Higher Relative Value				
PART V *(To be completed by SCS)* Land Evaluation Criterion Relative Value Of Farmland To Be Converted *(Scale of 0 to 100 Points)*		100	100	
PART VI *(To be completed by Federal Agency)* Site Assessment Criteria *(These criteria are explained in 7 CFR 658.5(b))*	Maximum Points			Not Applicable
1. Area in Nonurban Use	15	15	15	
2. Perimeter in Nonurban Use	10	10	10	
3. Percent of Site Being Farmed	20	10	10	
4. Protection Provided by State and Local Government	20	0	0	
5. Distance From Urban Builtup Area	N/A	--	--	
6. Distance to Urban Support Services	N/A	--	--	
7. Size of Present Farm Unit Compared to Average	10	10	10	
8. Creation of Nonfarmable Farmland	25	0	2	
9. Availability of Farm Support Services	5	2	2	
10. On-Farm Investments	20	5	5	
11. Effects of Conversion on Farm Support Services	25	0	0	
12. Compatibility With Existing Agricultural Use	10	0	0	
TOTAL SITE ASSESSMENT POINTS	160	52	52	
PART VII *(To be completed by Federal Agency)*				
Relative Value Of Farmland *(From Part V)*	100	100	100	
Total Site Assessment *(From Part VI above or a local Site assessment)*	160	52	52	
TOTAL POINTS *(Total of above 2 lines)*	260	152	152	

Site Selected: Action As Proposed	Date of Selection 2-7-01	Was a Local Site Assessment Used? Yes ☐ No ☒

Reason For

(See Instructions on reverse side)

Form AD-1006 (10-83)

United States Department of the Interior

FISH AND WILDLIFE SERVICE
MONTANA FIELD OFFICE
100 N. PARK, SUITE 320
HELENA, MONTANA 59601
PHONE (406) 449-5225, FAX (406) 449-5339

MASTER FILE
COPY

D. Nardenrode - R
B. McChesney
R. Mengel
B. Juve
J. Peaslee
A. McRae
File
T. Atkins
Note: See first paragraph on page

M.44 MDOT (I) December 28, 2000

Larry Sickerson
Environmental Services
Montana Department of Transportation
2701 Prospect Avenue
PO Box 201001
Helena, Montana 59620-1001

RECEIVED
JAN 02 2001
ENVIRONMENTAL

Dear Mr. Sickerson:

This is in response to your December 14 letter requesting US Fish and Wildlife Service (Service) concurrence with your determination that three adjoining Montana Department of Transportation (Department) highway reconstruction projects will not likely adversely affect threatened or endangered species. The proposed projects involve 34.5 miles of US Highway 212 and Montana Highway 59 in Powder River County, Montana. Projects included in this Epsie National Highway System Corridor are: Epsie - East & West (STPP 39-3(6)85, Control No. 2149); Epsie - East (NH 37-3(10)96, Control No. 4056); and Broadus - East (F 23-2(11)78 F, Control No. 1517). The Service received your letter on December 18.

The December 4 Biological Resources Report (BRR) accompanying your letter concluded that the aforementioned projects would not affect the endangered black-footed ferret (*Mustela nigripes*) or whooping crane (*Grus americana*), nor jeopardize the continued existence of the mountain plover (*Charadrius montanus*), which is proposed for listing as threatened. In addition, the BRR determined that these projects would not likely adversely affect the threatened bald eagle (*Haliaeetus leucocephalus*). It was also asserted that the continued existence of the candidate species that may occur in the project vicinity, black-tailed prairie dog (*Cynomys ludovicianus*), swift fox (*Vulpes velox*), and sturgeon chub (*Macrhybopsis gelida*), would not be jeopardized. Based upon information you provided, the Service concurs that these species will not likely be adversely affected by these projects and formal consultation is not required.

As indicated in the BRR, cliff swallows (*Hirundo pyrrhonota*) were observed nesting under the Powder River bridge, which is proposed to have its guardrails and expansion joints replaced. To comply with the Migratory Bird Treaty Act of 1918, as amended (16 U.S.C. 703 et seq) (MBTA) and avoid the taking of cliff swallows that may be nesting under the bridge, the Service recommends that any major construction activities planned to occur to the under side of the bridge be conducted outside swallow nesting season (May 15 - August 31). However, information from the Department has indicated that the types of work proposed for this bridge are unlikely to result in the taking of cliff swallows.

The Service acknowledges the Department's efforts to minimize impacts to wildlife resources that may result from the construction, use, and maintenance of Montana's transportation systems. Specifically, the Service encourages the implementation of measures designed to offset these impacts, such as those listed on page 13 of this project's BRR. The Service especially advocates implementation of the measure that recommends that trees suitable for nesting which will be eliminated during construction activities be removed outside the nesting season, thus preventing the destruction of nests of migratory birds which will assist in complying with the MBTA.

This concludes informal consultation pursuant to regulations 50 CFR §402.13 implementing the Endangered Species Act of 1973, as amended (Act). These projects should be re-analyzed if new information reveals effects of the action that may affect listed species, if the projects are modified in a manner that causes an effect not considered in this consultation, or if the Conservation Measures listed on page 29 of the BRR are not fully implemented.

The Service appreciates your efforts to consider and conserve fish and wildlife resources, including threatened and endangered species. If you have questions regarding this letter or your responsibilities under the Act, please contact Mr. Scott Jackson, of my staff, at (406)449-5225, ext. 201.

Sincerely,

Bill Olsen
fr R. Mark Wilson
Field Supervisor

Copy to: FWS-ES, Billings

JOSEF
MDT

MDT
Montana Department
of Transportation

2701 Prospect Avenue
PO Box 201001
Helena MT 59620-1001

Marc Racicot, Governor

October 13, 2000

2000101708

RECEIVED
NOV 09 2000
BY:
ENVIRONMENTAL

OCT 17 2000

MONTANA SHPO
DATE 6Nov2000 SIGNED Josef Warhank

Mark Baumler
State Historic Preservation Office
Montana Historical Society
1410 East 8th Avenue
P.O. Box 201202
Helena, MT 59620

Subject: **East of Epsie East**
NH 37-3(10)96
Control Number 4056

Dear Mark,

Enclosed for your review and comment is the cultural resource inventory report prepared for the above Montana Department of Transportation (MDT) project.

Four sites were located within the project's area of potential effect. Ethnoscience found one new prehistoric site, 24PR1295, which consists of seven porcellanite flakes, and two isolated artifacts (both are porcellanite flakes). A 1 by 1 meter unit was placed in 24PR1295. It yielded a soil profile but no artifacts. Neither the lithic scatter nor the isolated finds are considered eligible under criterion D.

The other sites consist of an historic road segment, 24PR1297, a reclaimed, historic coal mine, 24PR1296, and an historic stock pond and earthen dam, 24PR1298. The historic road segment need not be evaluated per MDT's Programmatic Agreement on Historic Roads and Bridges. Neither the reclaimed coal mine nor the stock pond and dam are considered eligible under Criteria A, B, C, or D.

I realize that a portion of the project area was only surveyed to the present right of way fence, due to lack of landowner permission to survey outside current right of way. Once plans become available we will know whether or not the road work will impact areas outside of the present right of way limits. If impacts are anticipated, we will see to it that the area not covered in this report is surveyed, and any sites found in that area evaluated.

If you have questions please call me at 444-0455 or email at splatt@state.mt.us.

Steve Platt, Archaeologist
Environmental Services

Cc: Gordon Stockstad, Chief, Resources & Permitting

file: MDOT/2000

DEPARTMENT OF NATURAL
RESOURCES AND CONSERVATION
MILES CITY

MARC RACICOT, GOVERNOR

TELEFAX: (406) 232-3807
321 MAIN STREET

STATE OF MONTANA

EASTERN LAND OFFICE
PO BOX 1794
MILES CITY, MT 59301-1794
(406) 232-2034 OR 2045

CONSERVATION & RESOURCE DEVELOPMENT DIVISION
PO BOX 276
MILES CITY, MT 59301-0276
(406) 232-6359 OR 6460

February 15, 2000

Barry C. Brosten
Engineering Bureau Chief
Environmental Services
Montana Department of Transportation
PO Box 201001
Helena, MT 59301

RECEIVED
FEB 16 2000
ENVIRONMENTAL

Subject: Epsie NHS Corridor Projects

Dear Mr. Brosten:

In response to your recent letter, it appears that the only State Lands impacted are Section 36, T3S, R48E and Section 36, T5S, R52E in Powder River County. The following responses are to your specific questions:

- There are no known cultural sites or concerns for this proposed project.
- There are no active mineral leases or mining activities in the project vicinity.
- No specific leases or lands are present that should be adversely impacted.
- No merchantable timber is present.
- We are not aware of any lands that have present or planned usage under *Section 4(f)* of the 1966 *Department of Transportation Act* (49 U.S. C. 330). This site also is not eligible for inclusion, or in the National Register of Historic Places (under *Section 106* of the *National Historic Preservation Act*, 16 U.S.C.470.
- We have no record of any land in the project vicinity having been purchased or administered for recreational purposes under *Section 6(f)* of the *National Land & Water Conservation Act* (16 U.S.C. 460).
- Our records show that easements have been issued to Tongue River Electric Cooperative and Range Telephone Cooperative in Section 36, T3S, R48E; and to East Fork Telephone in Section 36, T5S, R52E. You need to coordinate with those existing users if their cables and lines fall within the location of the proposed work. We have no additional plans for projects at this time.

Land Use Licenses and /or additional right-of-way will be required if the project is conducted outside of the existing right-of-way width. We also request that during project construction that existing approaches be maintained to allow us continued access to State Land.

Thank you for contacting us to be a cooperating agency. If you need any additional information please feel free to contact me.

Sincerely,

Sharon Moore

Sharon Moore
Land Use Specialist

CC: Lisa Axline, Right-of -Way Specialist, Helena

RECEIVED
FEB 2 4 2000
ROBERT PECCIA
& ASSOCIATES

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Miles City Field Office
111 Garryowen Road
Miles City, Montana 59301

RECEIVED
FEB 11 2000
ENVIRONMENTAL

IN REPLY TO:
MTM-027166
2800

FEB 10 2000

Montana Department of Transportation
Environmental Services
P. O. Box 201001
Helena, Montana 59620-1001

Dear Mr. Brosten:

Our office is willing to be a Cooperating Agency on your proposed STPP 37-3(6)85 Epsie - East and West, Control #2149 project as far as reviewing documents. The Federal land involved was issued under right-of-way MTM-027166.

The affected Federal land is being managed for multiple use but does not fit under the provisions of "Section 4(f)" of the 1966 U. S. Department of Transportation Act (49 U.S.C. 303) as you listed as parts a. through d. in your letter.

If Federal land outside the existing right-of-way will be involved, please submit a map and a written request from the Federal Highway Administration for appropriation of those lands. A copy of the Master title Plat for this area has been enclosed.

If you have any questions, please contact Dalice Landers, Realty Specialist, at the above address or call at 406-233-2836.

Sincerely,

Todd S. Christensen

Todd S. Christensen
Assistant Field Manager - Resources

Enclosure

MASTER COPY

Montana Historical Society
Historic Preservation Office
1410 8th Avenue • PO Box 201202 • Helena, MT 59620-1202 • (406) 444-7715 • FAX (406) 444-6575

RECEIVED
NOV 24 1998
ENVIRONMENTAL

November 20, 1998

Steve Platt
MDT/Environmental Services

RE: Epsie East & West Determinations of Eligibility

Steve:

We have reviewed Aabergs report for the above referenced project. Aaberg's report leaves little to complain about, we find that his report meets professional standards in every way. But, K. Deaver once told me that I'd make a good farmer (a better farmer than a archaeology reviewer?) - since I could find something to complain about anyplace, anytime, about anything. Here I would have preferred a broader approach to lithic scatter eligibility requirements. Intact deposition and temporally diagnostic points won't move us much further than we are. Perhaps a landform/site distribution approach could help, I think I remember Deaver and Deaver (1988) suggesting something of the sort. Small lineal projects such as this do not lend themselves to such model building and such, but lithic scatters in SE MT will likely never add much to our understanding of broad historic trends individually, and until we get past temporally diagnostic tools. Secondly, I think it would have been appropriate to include photos of the so called Epsie post office (aka the murder site).

Having said that we are quite prepared to **concur** in your eligibility determinations: 24PR1792, 1900, 1901, 1902, 1556 and 1903 are **Not eligible**. We do want to consult further on 24PR1793 when an alignment is proposed. Perhaps some 1xs would help?

Thank you.

Stan

Stan Wilmoth, Ph.D.
HPO

P.S. how about calling arch records and requesting 24PR1807 DUP. being dropped?

Montana Department
of
Fish, Wildlife & Parks

1420 East Sixth Avenue
Helena, Montana 59620

MASTER FILE
COPY

cc: Les Peterson
PRE-CON

Y 2 - 1994
ENVIRONMENTAL BUREAU

May 16, 1994

Mr. Gordon Stockstad, Acting Chief
Environmental and Hazardous Waste Bureau
Dept. of Transportation
2701 Prospect
Helena, MT 59620

Dear Mr. Stockstad:

RE: STPP 37-3 (6) 85
EPSIE - East & West
Control No. 2149

We have reviewed your above-mentioned proposed project for road improvement.

The Department of Fish, Wildlife and Parks knows of no Section 6(f) of the Land and Water Conservation Fund Act or Section 4(f) of the 1966 Department of Transportation Act impacts which would occur as a result of the proposed road improvements.

Thank you for the opportunity to comment. We appreciate your cooperation.

Sincerely,

Mary Ellen McDonald

MARY ELLEN McDONALD
Program Officer
Operations Bureau
Parks Division

cc: R-7 Supervisor
R-7 Park Manager

ks

Montana Department
of
Fish, Wildlife & Parks

1420 East Sixth Avenue
Helena, Montana 59620

RECEIVED
MAY 24 1994
ENVIRONMENTAL BUREAU

MASTER FILE
COPY

cc: Les Peterson
PRE-CON

May 16, 1994

Mr. Gordon Stockstad, Acting Chief
Environmental & Hazardous Waste Bureau
Dept. of Transportation
2701 Prospect
Helena, MT 59620

6(f)

Dear Mr. Stockstad:

RE: F 23-2 (11) 78
Broadus - East
Control No. 1517

We have reviewed your above-mentioned proposed project area and would like to bring to your attention the existence of the Powder River Golf Course.

This site was developed with the assistance of federal money through the Land and Water Conservation Fund. If any part of the site will be affected by your project, we will have to work with the federal government to mitigate any impacts.

If you feel there may be a potential impact, please contact me and I will provide you with any additional information you may require.

Thank you for the opportunity to comment.

Sincerely,

Mary Ellen McDonald

MARY ELLEN MC DONALD
Administrative Officer
Operations Bureau
Parks Division

cc: Commissioner Gerald Himelspach

ks

Montana Department
of
Fish, Wildlife & Parks

RECEIVED
APR 25 1994
ENVIRONMENTAL BUREAU

MASTER FILE
COPY

P.O. Box 1630
Miles City, MT 59301
April 22, 1994

Gordon Stockstad
Environmental and Hazardous Waste Bureau
Montana Dept. of Transportation
P.O. Box 20100
Helena, MT 59620

Dear Mr. Stockstad:

My comments are for the following projects:

F23-2 (11)78 Broadus East	STPP 37-3 (6) 85 Epsie - East & West
STPP-IM 0002 (61) Hysham Area (I94 P48)	STPS 277-1 (1) 25 Muskrat Ck - NE of Hammond

I believe these projects, based on the information I reviewed, will have no significant effect on wildlife, fisheries, or their associated habitat.

Sincerely,

Don Hyyppa

Don Hyyppa
Regional Supervisor

Appendix C: Public Involvement and Comments

BOARD OF COUNTY COMMISSIONERS
POWDER RIVER COUNTY
PO Box 270
Broadus, Montana 59317

March 31, 2000

Daniel M. Norderud, AICP
Environmental Planner
Robert Peccia & Associates
PO Box 5653
825 Custer Avenue
Helena, MT 59604

RE: Broadus - E; F23-21(11)78; C.N. 1517

The Powder River County Commissioners have some concerns pertaining to the Broadus E Highway project. Regarding the construction period:

1. The County, having no use for Community Transportation Enhancement Program (CTEP) funds at this time, has offered them to the Town of Broadus to extend the plan development to include a pedestrian/bicycle path. The path would run parallel to Highway 212 stretching from proposed path to the Powder River on the west side of the highway. If possible, allow the path to meander through the State portion of land on the west side of Highway 212 and reconnect to itself heading back into Broadus.
2. Reduce existing speed limits that are posted at 50 miles per hour to 40 miles per hour and speed limits that are posted at 40 miles per hour to 30 miles per hour.
3. A crosswalk for children to cross the highway to reach the county swimming pool.

RECEIVED
APR 0 3 2000
ROBERT PECCIA
& ASSOCIATES

The County Commissioners realize most of these concerns are not environmentally based, but the safety of our county residents is very important to us.

Thank you for contacting the Powder River County Commissioners for our input.

Sincerely,

BOARD OF COUNTY COMMISSIONERS
POWDER RIVER COUNTY

Kyle Butts
Kyle Butts, Chairman of the Board

Donald R. McDowell
Donald R. McDowell, Board Member

Ray Traub, Board Member

Town of Broadus Ph. 406 / 436-2409

BOX 659 • BROADUS, MONTANA 59317

March 9, 2000

Daniel M. Norderud, AICP
Environmental Planner
Robert Peccia & Associates
P. O. Box 5653
825 Custer Avenue
Helena, Montana 59604

RE: Broadus -E; F23-21(11) 78; C.N. 1517

The Broadus Town Council have several concerns pertaining to the Broadus E Highway Project. Regarding the construction period:

1) Traffic Detour: During construction, all traffic will be rerouted through Broadus. It is certain the route will pass through residential areas which increases our concern for safety. Advanced signing from both directions designating the detour, reduced speed limits, and pedestrians crossings are needed to slow traffic. Water trucks will be needed to keep the dust controlled and provide good visibility to vehicles traveling the detour route.
2) Construction phase of the Broadus E Highway project: It was understood during a meeting with Ray Mengel and Bill McChesney the project would be "let for bids" in January 2001. The construction is scheduled to begin during the year 2002 and it could possibly take two construction seasons to complete. If this is the case, will the project be split into two sections? How would the project be divided? By dividing the project, would it be possible to complete each section (meaning reconstruction - construction to paved) within the construction period? We realize there is a lot of work involved in reconstructing a highway and constructing curb, gutter and sidewalks. The weather will play a large part in keeping on schedule as well as other unforeseen mishaps. Our concerns lean back to the safety and welfare of our community during the construction process. Again, the importance of reduced speed limit signs, dust control and designated pedestrian crossings need to be stressed.
3) Will the proposed storm drainage be adequate to handle the water being routed through the system. If the run off exceeds the amount of water the underground system can handle, we assume the excess water will follow the terrain and flow into the drainage beside the storm drain. Therefore, replacement of existing culverts from Wilbur Avenue through Trautman Street will ensure that all water will drain properly and not flood the housing that is parallel to the storm drain.
4) Extend the plan development to include a Pedestrian/Bike Path running parallel to Highway 212 stretching from proposed path to the Powder River on the West side of the highway. If possible, allow the path to meander through the State portion of land on the West side of Highway 212 and reconnect to itself to head back into Broadus.

The following areas need to be incorporated into the Town section of the Broadus E project. These areas should not only be used during the construction period but be a permanent feature of Broadus E Highway.

1) Advanced signing from both directions to slow traffic for a ninety degree turn.
2) Either a four (4) way stop or stop lights at the ninety degree intersection. If asked what would be our preference, it would be four (4) four way stop. The traffic would be forced to slow down anticipating the stop at the intersection.
3) Reduce existing speed limits that are posted at 40 mph to 30 mph and speed limits that are posted at 30 mph to 25 mph.
4) Crosswalks are needed for all pedestrians, especially for the children crossing the highway to reach the swimming pool or the park. Areas which would be most beneficial are: one at the park, two at the ninety degree intersection and one adjacent to the swimming pool.

The Council realizes most of these concerns are not environmental based, but the safety of our community residents is very important to us. The completion of the Epsie E&W and Broadus E projects will be a tremendous improvement for our area. The improvements will also bring more traffic into our community. The slowing of traffic will help ensure the safety of pedestrians/bikers using existing paths within the Town Limits as well as those using the proposed path to the Powder River on the West side of Highway 212.

Your contacting the Broadus Town Council for input is greatly appreciated. Please keep us updated on your findings. If you should have any further questions. Please feel free to contact the Broadus Town Office at (406)436-2409.

Sincerely,

Milton L Amsden

Milton Amsden
Mayor

pc:file

RECEIVED
MAR 1 4 2000
ROBERT PECCIA
& ASSOCIATES

POWDER RIVER
EXAMINER
BROADUS MONTANA 59317
THURSDAY 1,400
JUN 29 1995

SUPERIOR CLIPPING SERVICE
GLENDIVE,MT 406-365-6612

(CA 1517)

Highway conditions causing lost revenue from tourists, truckers

Jim Lemke, concerned over the sharp reduction in tourism and trucker revenue to Broadus because of the condition of the state's highways in the area, is asking residents to band together to try to get the schedule for planned improvements moved up, or at the very least left at status quo in the face of state and federal cutbacks.

Lemke, a trucker, said that gas sales to tourists at the Farmers Cooperative Association in Broadus that he hauls for is "way down" this summer, and that truck traffic through Broadus is probably at about 50 percent of normal, because of the condition of Highway 212 and 59 North. He said that the big gas consumers - the self contained mobile units, are picking up information on the road conditions over the c.b. airwaves from the truckers and are simply going around too - around by the longer but better maintained interstate systems. Many of the smaller consumers - the day-to-day summer traffic that many businesses rely on to boost their year-round average revenue, have also chosen alternate routes because of the sorry condition of 212 and 59 North.

Last week, Lemke got on the phone to the Montana Department of Transportation. After being "handed around," he was finally connected with William L. McChesney, Chief Field Maintenance Bureau, Miles City Office. And the information he received was quite a bit less than comforting.

"In response to our phone conversation I've enclosed a list of "tentative" construction projects and proposed letting dates that will "hopefully" take place in Southeastern Montana over the next few years," said McChesney in a letter to Lemke. "It's important that you understand that none of these projects are guaranteed as a number of factors could affect them."

Projects and dates, as provided by McChesney to Lemke, are as follows:

(1) U.S. 212

-Camps Pass East / Mile 77-84 / total reconstruction / to be let to contract in December of 1996, construction should begin in the spring of 1997.

-Lame Deer East / Mile 42-54 / total reconstruction / to be let to contract in March of 1997, construction should begin that spring.

-Epsie East and West /; Mile 85 - 103 (103 is the junction of 212 and 59) / Overlay existing surface and widen / to be let to contract in October of 2000, construction should begin in the spring of 2001.

-Alzada West / Mile 119-130 / Widen and overlay existing surface / to be let in May of 1997 / construction should begin that summer.

-Broadus East / Mile 78 (Broadus) - 92 (beginning of the new Hammond Project) / total reconstruction / to be let in May of 2001, construction should begin that summer.

(2) Montana 59 - North of Broadus

-Olive North and South / Mile 48-62 / total reconstruction / to be let in August of 1999, construction probably won't begin until 2000.

-Coalwood North and South / Mile 48 - 62 / total reconstruction / to be let in August of 1999, construction probably won't begin until 2000.

-Volborg North and South / Mile 33-48 / total reconstruction / to be let in April of 2000, construction should begin that summer.

What it boils down to is that even the dangerous slide area on Camps Pass on Highway 212 is still two years away from repair, and that project is already jeopardized because of budget cuts by state and fed, Lemke said.

About the only recourse left that will hopefully at least keep the projects status quo, if not move them up in priority, Lemke said, is a show of force by a united population. Lemke encouraged residents - in groups and as individuals - to contact and continue to pressure through that contact - their Congressman and Senators along with the Montana Governor's office and anyone else who could have an influence over the decision making process concerning the condition of the highways.

POWDER RIVER
EXAMINER
BROADUS MONTANA 59317
THURSDAY 1,400
SEP 12 1996
SUPERIOR CLIPPING SERVICE
GLENDIVE,MT 406-365-6612

F 23-2(11)78 F
BROADUS-EAST
(P.M.S. C#1517)

Thursday, September

Regional D.O.T. Director presents program at Commercial Club

↓ Project's status discussed.

Mick Johnson, Montana Department of Transportation director for Eastern Montana, was on hand Monday to present an informational program at the Powder River Commercial Club's no-host luncheon meeting.

Club members attending included President Della Greslin, Vice President Joe Stuver, Sylvia Zimmer, Larry and Blondie Woolston, Mike and Marty Copps, David E. Gardner, Nancy Espy, Kyle Butts, Gloria Rosencranz, Jack and Pat Ridenour, Earl Mainwaring, Jeff Noble, Garry Wallace and Christine Franklin.

Johnson outlined planned highway improvement projects in the area along with scheduled dates for the projects and costs, and provided information on how projects are selected for priority.

Johnson's district – the "Glendive District" - is one of three in Montana, and covers pretty much the eastern third of the state, from the Canadian border west of Malta to the Montana-Wyoming border south and west of Lame Deer.

Two construction projects are planned in the area next summer, and several more within the next hree to four years, Johnson said.

) One project to begin next ummer is the Alzada West Proect, which will be completed at ı cost of around $10,000,000. ncluded in the project will be videning and re-surfacing the outhern gravel route into Vyoming for several miles, and round ten miles of Highway 12 west of Alzada.

) Also scheduled in the near fuure is the Otter Creek North and outh project, which calls for econstruction of 7.8 miles of ne Otter Creek Roadway. That oject is a "county secondary roject" made a priority by ommissioners some years ago. ommissioners Espy and Butts - ected to office since the origial plan was approved - inquired ıto the possibility of using the ınds elsewhere in the county - preading the project funds" to her areas of greater need.

Johnson said the DOT will onsider re-vamping plans. Input from the public will help in the decision making process.

(3) Also planned next summer is the construction of the Broadus East rest area and visitors center. The visitor's information center construction depends on the availability of CTEP funding.

Johnson said that the planned (4) "Lame Deer East" project - scheduled to get underway next summer, has been put off, again, until possibly 1999 or the year 2,000. That project calls for reconstruction of 11.9 miles east of Lame Deer on Highway 212.

(5) The "Broadus East" project, is also tentatively slated to begin in the year 2,000, Johnson said. It will begin at the Highway 59, 212 intersection east of Broadus and will run through town to the west, where the old highway widens. Plans call for total highway re–construction, along with installation of curbs, sidewalks and storm drains on at least one side of the highway through town.

The project had originally been slated to begin in 1996-97, but was taken off top priority because of funding problems.

(6) The "Camps Pass" project - which includes the slide area and detour at the top of the Divide, is not scheduled for completion until the summer of 1988. Because some of the project is on Forest Service Land, the DOT is waiting approval of some funding from that source.

7 (8) Planned improvements on Highway 59 North, the Coalwood and Olive projects - of about 16 miles each - are at a standstill because of the unwillingness of adjacent landowners to sell the necessary property to the state, Johnson said. There are also EPA concerns, as the project would include around four acres of wetlands in the Mizpah Creek area. "We have to replace those wetlands," said Johnson. "Also, there is the fact that no one wants to sell their property, on both sides of the road. If they say no that makes it kind of difficult to continue."

Johnson said that there is even the outside chance that Highway 59 North could revert back to a gravel roadway if improvement projects continue to be blocked.

Johnson told the group that there are "many factors" considered in giving priority to projects, including soil, water and environmental concerns. He said that every summer, engineering students from MSU are hired to drive every mile of highway in the state, with "grading systems" which are determined by such factors as rutting and general condition and safety. Input from the public is also taken into consideration.

Another factor in making project decisions, Johnson said, is the "human factor." He explained that projects "virtually shut down the economy of the area," especially on highways such as 212 where there is an easy alternative route - the Interstate systems. He said that traffic through Ashland dropped approximately 28 percent during the most recent project in that area. "It can be devastating for little businesses," he said. And, if two projects are scheduled on the same route, the economical impact to area businesses significantly increased.

"Highway 212 can easily be driven around. If I were to put a 35 mile per hour speed limit from Lame Deer to Broadus, virtually all of the truck traffic would go the other way," Johnson explained.

In other business on the agenda, Events Committee members Sylvia Zimmer and Blondie Woolston reported that the general consensus concerning the annual Crazy Days was that this year's event "was a flop."

Next year, the Club and its businesses will probably go back to the original "first Saturday in August" program, which will include the popular appreciation barbecue and goat flop at the Big Sky. Members also discussed the possibility of again combining Crazy Days with a one-day Chokecherry arts and crafts festival.

The Club-sponsored Christmas Stroll - perhaps its premiere annual event – will again be held the first Monday of December. Plans will be announced as the date approaches.

In appreciation of the outstanding efforts of the DNRC Fire STRIKE Force team members, the Club will recognize the crew following yet another fire safety meeting Wednesday evening (yesterday). The team is scheduled to leave the community this Friday. While here, the crew has provided invaluable services to the entire Powder River Community. Their bonding with the community resulted in many lasting friendships.

Ag Committee Chairperson David E. Gardner reported that his group had met last week to look for ways to help out residents of the Powderville area who lost so much during the recent 90,000 acre fire. Again, plans will be announced as they develop.

Garry Wallace reported on the status of the housing and dentist grant projects. Former project coordinator Gloria Rosencranz resigned, and Christine Franklin has been hired in replacement.

Rosencranz said that feasibility studies are continuing concerning the possibility of construction of housing facilities, such as a assisted living facility and low income units.

Wallace also said that he and several other Club members had traveled to Helena, where they appeared before the Montana Dental Board in an attempt to get them to change their rule prohibiting out-of–state dentists from practicing in Montana.

Belle Fourche dentist John Jackson had earlier expressed a willingness to open an office in Broadus on a part-time weekly basis, but was prevented from doing so by the ruling.

Wallace said that they were told that the Dental Association "had already solved our problem." DDS Lang of Miles City made his first visit last week - without the knowledge of the public or publicity. None of the members present knew of Lang, despite the fact that he has practiced in Miles City for the past several decades.

Wallace said that is is a matter of the Association members "protecting their turf. They don't want out of state dentists coming in."

No word as of yet on any final decision.

Mike Copps reported tha Richardson Operating of Denve CO has completed the purchase and take-over of the Belle Creek Oil Field from Exxon, Inc.

At this point, Copps, said Richardson Operating is re viewing their new holdings, in planning for future production.

He added that the firm is al ready doing business in Broadus so the trip to Denver by Club members "paid off."

The Examiner will be in con tact with Richardson Operating personnel in the near future, to pass on information to its readers.

Appendix D: Nationwide Programmatic Section 4(f) Evaluation and Related Materials

MONTANA DIVISION

"NATIONWIDE" *SECTION 4(f)* EVALUATION FOR MINOR IMPACTS
ON
HISTORIC SITES
EXCLUDING HISTORIC BRIDGE REPLACEMENTS

Project # STPP 37-3(6) 85, (P.M.S. C#2149)

Date: November 12, 2001

Project Name: Epsie-East & West

Location: Pumpkin Creek Prehistoric Site
Site Number 24PR1793/1807
Powder River County, Montana

The Epsie-East & West project would affect the Pumpkin Creek Prehistoric Site (24PR1793/1807), a site previously determined eligible for the NATIONAL REGISTER OF HISTORIC PLACES. The 9.7 ha (24.0 acre) site occurs within the historic floodplain of Pumpkin Creek on both sides of U.S. Highway 212 near the beginning (west end) of the Epsie-East & West project. The attached figure shows the general location of the Pumpkin Creek Prehistoric Site. To date, the site has yielded widely distributed cultural material scatter and intact buried cultural deposits including a number of heat-altered rock features.

The proposed Epsie East & West project would shift the road's centerline northward to approximately the north edge of the present pavement. MDT's preliminary plans show that an area within 24PR1793/1807 totaling about 0.36 ha (0.89 acres) would be within the proposed new right-of-way for the highway and could be disturbed by construction activities. The attached figure shows the area of the prehistoric site affected by this proposed project.

NOTE: Any response in a box [ ] requires additional information. Consult the "Nationwide" Section 4(f) Evaluation criteria.

	YES	NO
1. Is the *4(f)* site adjacent to the existing highway?	X	☐
2. Does the proposed project require the removal or alteration of historic structures, and/or objects?	☐	X
3. Does the proposed project disturb or remove archaeological resources which are important to preserve in-place rather than to recover? **Subsurface archaeological testing performed during October 2001 did not identify any significant cultural materials within the affected portion of 24PR1793/1807.**	☐	X
4. Is the impact on the *4(f)* site considered minor (i.e.: no effect; or no adverse effect)? **MDT determined there would be no effect to 24PR1793/1807.**	X	☐
5. Has the STATE HISTORIC PRESERVATION OFFICE (SHPO) agreed in writing with the assessment of impacts, and the proposed mitigation? **MDT will seek concurrence from SHPO for its Determination of Effect when a report detailing the results of site testing is completed.**	___	☒
6. Is the proposed action under an Environmental Impact Statement (E.I.S.)?	☐	X
7. Is the proposed project on a new location? **The centerline of the new highway would be at the north edge of the existing pavement within the site.**	☐	X
8. The Scope-of-Work for the proposed project is one of the following: a) **Improved traffic operation;** b) **Safety improvements;** c) 3R; d) Bridge replacement on essentially the same alignment; or e) Addition of lanes.	X	☐

NOTE: Any response in a box[ ] requires additional information. Consult the "Nationwide" Section 4(f) Evaluation criteria.

ALTERNATIVES CONSIDERED

YES NO

1. The "do-nothing" **ALTERNATIVE** has been evaluated, and is not considered to be feasible and prudent. X [_]

2. An **ALTERNATIVE** has been evaluated on the existing alignment which improves the highway without any *4(f)* impacts, and is also not considered to be feasible and prudent. X [_]

   Reconstructing the existing highway on its current alignment without substantially widening the roadway does not meet the project's principal purpose and need which is to improve traffic safety on the facility.

   Since U.S. Highway 212 bisects 24PR1793/1807, road widening and reconstruction on the existing alignment cannot be accomplished without affecting other portions of the site. To date, the most significant cultural materials have been discovered on the south side of the existing highway. Building on the existing centerline was rejected from consideration because of the high costs associated with maintaining traffic on the road during construction. Such an alignment was also rejected due to the potential for numerous and costly conflicts with the utilities that exist along both sides of the existing highway.

3. An **ALTERNATIVE** on a new location avoiding the *4(f)* site has been evaluated, and is not considered to be feasible and prudent. X [_]

   The existing transportation corridor established the location for the road. 24PR1793/1807 could be avoided if the highway were developed along a new alignment in the vicinity of this site. However, such an alignment could potentially affect wetlands, sever important farmland or pasture lands, displace residents, and add substantially to the cost of the project.

MINIMIZATION OF HARM

1. The proposed project includes all possible planning to minimize harm. X [_]

2. Measures to minimize harm include the following:

   No measures to minimize harm are proposed since the proposed highway reconstruction would result in no effect to 24PR1793/1807.

COORDINATION

1. The proposed project has been **COORDINATED** with the following:

   a) SHPO X [_]

   SHPO concurred with NRHP eligibility determinations for cultural sites recorded during cultural resources survey for the Epsie-East & West project on 11/20/98.

   SHPO's concurrence with MDT's Determination of Effect for 24PR1793/1807 will be requested when the results of additional site testing are available.

   b) ADVISORY COUNCIL ON HISTORIC PRESERVATION ___ [X]

   Since there would be no effect to 24PR1793/1807, coordination with the ACHP is unnecessary.

COORDINATION (continued)

	YES	NO
c) Property owners	___	X
d) Local/State/Federal agencies	X	☐

Cooperating Agencies for EA
Bureau of Land Management - (Miles City Field Office) -- 2/10/00
Montana Department of Natural Resources and Conservation
(Eastern Land Office) -- 2/15/00

	YES	NO
2. One of the preceding had the following comment(s) regarding this proposed project, and/or the mitigation:	X	___

SHPO's letter of 11/20/98 to Steve Platt of MDT Environmental Services requested further consultation regarding 24PR1793/1807 be performed when an alignment for the Epsie East & West corridor was established. This coordination has been completed.

SUMMARY

The "Do Nothing" alternative ignores the basic transportation need for improving road safety within the Epsie-East & West project area. The existing roadway has numerous design and physical deficiencies that contribute to reduced safety for highway users. Several key deficiencies (like roadway width and alignment) can only be corrected by reconstructing the highway to comply with MDT's current design standards for Rural Principal Arterials. Reconstruction following the existing centerline within the Epsie NHS Corridor was considered by MDT but rejected because of the high costs associated with maintaining traffic on the road during construction and the potential for conflicts to occur with utilities that exist along both sides of the existing highway. Impacts to the Pumpkin Creek site would not be avoided by reconstruction following the existing alignment. Building the road on a totally new alignment to avoid the Pumpkin Creek site has the potential to result in adverse environmental effects and would be more costly than MDT's proposal. Reconstructing the highway on a slightly offset alignment would allow the maintenance of traffic during construction and would generally limit the impacts to 24PR1793/1807 to a portion of the site where the probability of encountering significant cultural materials is relatively low. Part III of the attached Environmental Assessment describes the alternatives considered and viable alternatives for this proposed action.

The proposed action meets all criteria regarding the required **Alternatives**, **Coordination**, and **Measures to Minimize Harm**. All possible planning to minimize harm to the Pumpkin Creek Prehistoric Site (24PR1793/1807) has been undertaken and will be incorporated in this proposed project. This proposed project therefore complies with the December 23, 1986 Final Nationwide *Section 4(f)* Evaluation by the U.S. DEPARTMENT OF TRANSPORTATION's Federal Highway Administration.

APPROVAL

This document is submitted pursuant to **49 U.S.C. 303** and in accordance with the provisions of **16 U.S.C. 470f.**

______________________________ Date: ____________________
Jean Riley
Engineering Bureau Chief
MDT Environmental Services

Approved: ______________________________ Date: ____________________
Federal Highway Administration

Aaberg Cultural Resource Consulting Service
2909 East MacDonald Drive Billings, MT 59102 phone/fax (406) 655-3540

October 31, 2001

Dan Norderud
Epsie NHS Corridor Projects Manager
Robert Peccia & Associates
PO Box 5653
825 Custer
Helena, MT 59604

Dear Dan:

We completed all subsurface archaeological testing at the Pumpkin Creek Site between October 8 and 10, 2001. We excavated 10 shovel probes and three formal one meter square units on the north side of U.S. Highway 212 from the Pumpkin Creek channel westward for about 150 meters. We found very little in the way of archaeological materials and will recommend that this portion of the site is not significant and does not contribute to the significance of 24PR1793/1807. We are presently working on the report detailing results of testing and will likely complete it in November of 2001.

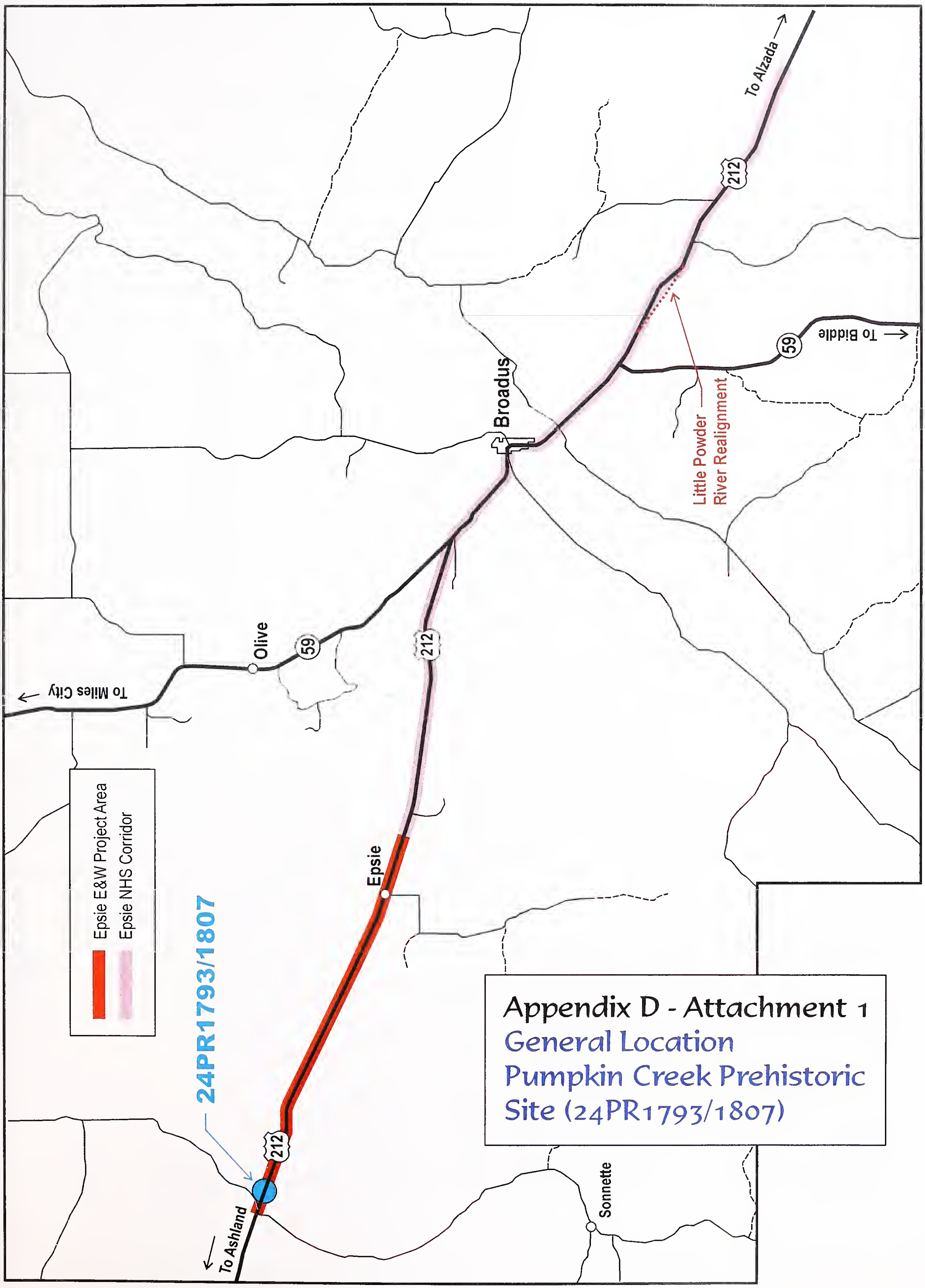
Enclosed is a signed copy of the subconsultant agreement between Aaberg Cultural Resource Consulting Service and Robert Peccia & Associates. Also enclosed is an invoice to cover costs incurred during the October 8-10, 2001 fieldwork and some costs incurred on report preparation. Please feel free to call if you have any questions.

Sincerely,

Stephen A. Aaberg

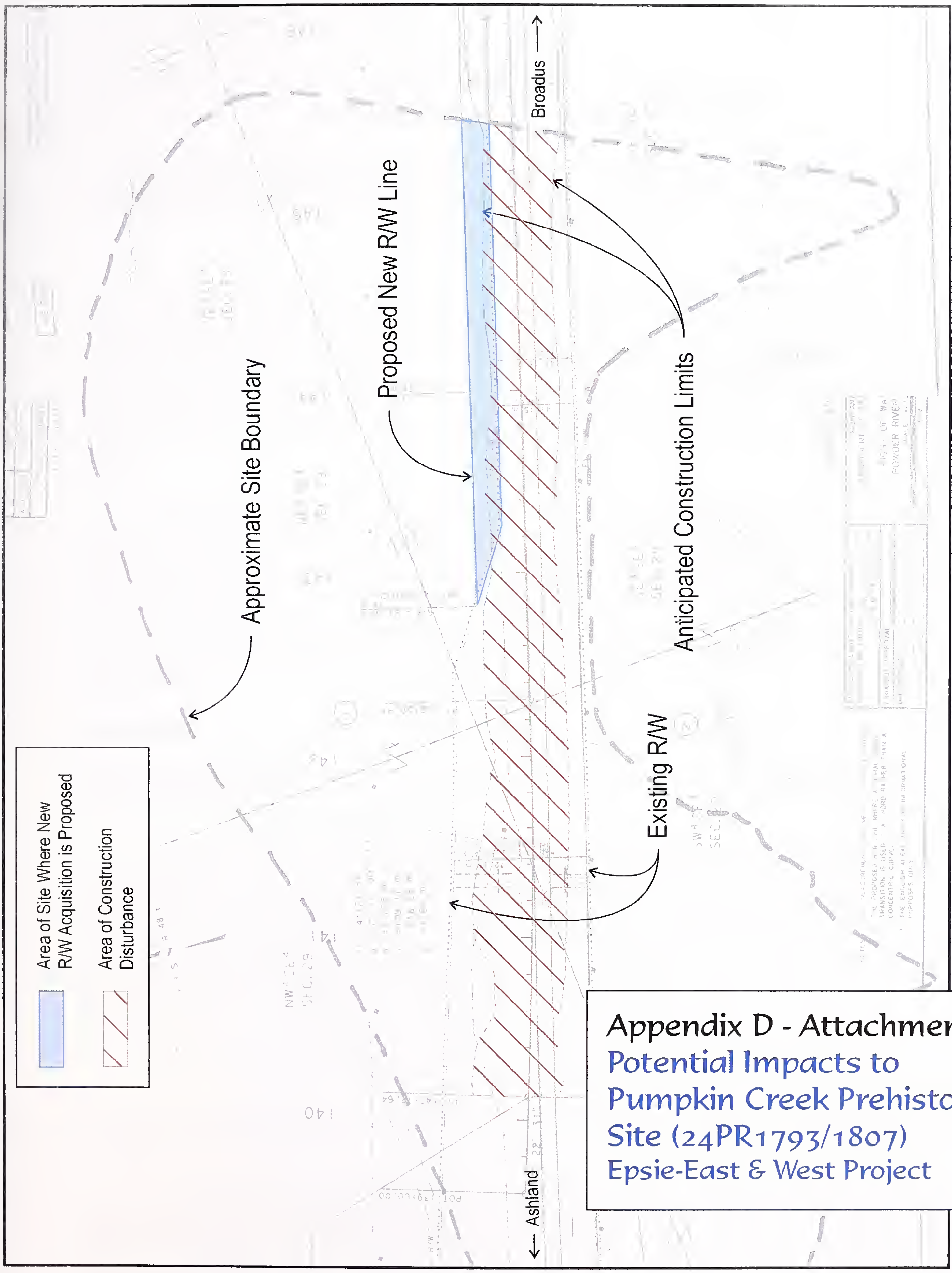
encl.

RECEIVED
NOV 01 2001
ROBERT PECCIA
& ASSOCIATES



Appendix D - Attachment 1

General Location
Pumpkin Creek Prehistoric Site (24PR1793/1807)


Broadus
Proposed New R/W Line
Approximate Site Boundary
Anticipated Construction Limits
Existing R/W
Ashland
Area of Site Where New R/W Acquisition is Proposed
Area of Construction Disturbance

Appendix D - Attachment 2
Potential Impacts to Pumpkin Creek Prehistoric Site (24PR1793/1807)
Epsie-East & West Project

U.S. Department of Transportation
Federal Highway Administration

FINAL NATIONWIDE SECTION 4(F) EVALUATION AND APPROVAL FOR FEDERALLY-AIDED HIGHWAY PROJECTS WITH MINOR INVOLVEMENTS WITH HISTORIC SITES

This programmatic Section 4(f) evaluation has been prepared for projects which improve existing highways and use minor amounts of land (including non-historic improvements thereon) from historic sites that are adjacent to existing highways. This programmatic Section 4(f) evaluation satisfies the requirements of Section 4(f) for all projects that meet the applicability criteria listed below. No individual Section 4(f) evaluations need be prepared for such projects. (Note a similar programmatic Section 4(f) evaluation has been prepared for projects which use minor amounts of publicly owned public parks, recreation lands, or wildlife and waterfowl refuges).

The FHWA Division Administrator is responsible for reviewing each individual project to determine that it meets the criteria and procedures of this programmatic Section 4(f) evaluation. The Division Administrator's determinations will be thorough and will clearly document the items that have been reviewed. The written analysis and determinations will be combined in a single document and placed in the project record and will be made available to the public upon request. This programmatic evaluation will not change the existing procedures for project compliance with the National Environmental Policy Act (NEPA) or with public involvement requirements.

Applicability

This programmatic Section 4(f) evaluation may be applied by FHWA only to projects meeting the following criteria:

1. The proposed project is designed to improve the operational characteristics, safety, and/or physical condition of existing highway facilities on essentially the same alignment. This includes"4R" work (resurfacing, restoration, rehabilitation and reconstruction); safety improvements, such as shoulder widening and the correction of substandard curves and intersections; traffic operation improvements, such as signalization, channelization, and turning or climbing lanes; bicycle and pedestrian facilities; bridge replacements on essentially the same alignment, and the construction of additional lanes. This programmatic Section 4(f) evaluation does not apply to the construction of a highway on a new location.

2. The historic site involved is located adjacent to the existing highway.

3. The project does not require the removal or alteration of historic buildings, structures or objects on the historic site.

4. The project does not require the disturbance or removal of archeological resources that are important to preserve in place rather than to remove for archeological research. The determination of the importance to preserve in place will be based on consultation with the State Historic Preservation Officer (SHPO) and, if appropriate, the Advisory Council on Historic Preservation (ACHP).

5. The impact on the Section 4(f) site resulting from the use of the land must be considered minor. The word minor is narrowly defined as having either a "no effect" or "no adverse effect" (when applying the requirements of Section 106 of the National Historic Preservation Act and 36 CFR Part 800) on the qualities which qualified the site for listing or eligibility on the National Register of Historic Places. The ACHP must not object to the determination of "no adverse effect."

6. The SHPO must agree, in writing with the assessment of impacts of the proposed project on and the proposed mitigation for the historic sites.

7. This programmatic evaluation does not apply to projects for which an environmental impact statement (EIS) is prepared, unless the use of Section 4(f) lands is discovered after the approval of the final EIS.
Should any of the above criteria not be met, this programmatic Section 4(f) evaluation cannot be used, and an individual Section 4(f) evaluation must be prepared.

Alternatives

The following alternatives avoid any use of the historic site.

1. Do nothing.
2. Improve the highway without using the adjacent historic site.
3. Build an improved facility on new location without using the historic site.

This list is intended to be all-inclusive. The programmatic Section 4(f) evaluation does not apply if a feasible and prudent alternative is identified that is not discussed in this document. The project record must clearly demonstrate that each of the above alternatives was fully evaluated before the FHWA Division Administrator concluded that the programmatic Section 4(f) evaluation applied to the project.

Findings

In order for this programmatic Section 4(f) evaluation to be applied to a project, each of the following findings must be supported by the circumstances, studies, and consultations on the project:

1. Do Nothing Alternative The Do Nothing Alternative is not feasible and prudent because: (a) it would not correct existing or projected capacity deficiencies or; (b) it would not correct existing safety hazards; or (c) it would not correct existing deteriorated conditions and maintenance problems; and (d) not providing such correction would constitute a cost or community impact of extraordinary magnitude, or would result in truly unusual or unique problems, when compared with the proposed use of the Section 4(f) lands.

2. Improvement without Using the Adjacent Section 4(f) Lands It is not feasible and prudent to avoid Section 4(f) lands by roadway design or transportation system management techniques (including, but not limited to, minor alignment shifts, changes in geometric design standards, use of retaining walls and/or other structures, and traffic diversions or other traffic management measures) because implementing such measures would result in: (a) substantial adverse community impacts to adjacent homes, businesses or other improved

properties; or (b) substantially increased roadway or structure cost; or (c) unique engineering, traffic, maintenance, or safety problems, or (d) substantial adverse social, economic, or environmental impacts; or (e) the project not meeting identified transportation needs; and (f) the impacts, costs, or problems would be truly unusual or unique, or of extraordinary magnitude when compared with the proposed use of Section 4(f) lands. Flexibility in the application of American Association of State Highway and Transportation officials (AASHTO) geometric standards should be exercised, as permitted in 23 CFR 625, during the analysis of this alternative.

3. Alternatives on New Location It is not feasible and prudent to avoid Section 4(f) lands by constructing on new alignment because (a) the new location would not solve existing transportation safety or maintenance problems; or (b) the new location would result in substantial adverse social, economic, or environmental impacts (including such impacts as extensive severing of productive farmlands, displacement of a substantial number of families or businesses, serious disruption of established travel patterns, substantial damage to wetlands or other sensitive natural areas, or greater impacts to other Section 4(f) lands); or (c) the new location would substantially increase costs or engineering difficulties (such as an inability to achieve minimum design standards, or to meet the requirements of various permitting agencies such as those involved with navigation, pollution, and the environment); and (d) such problems, impacts, costs, or difficulties would be truly unusual or unique, or of extraordinary magnitude when compared with the proposed use of Section 4(f) lands. Flexibility in the application of AASHTO geometric standards should be exercised, as permitted in 23 CFR 625, during the analysis of this alternative.

Measures to Minimize Harm

This programmatic Section 4(f) evaluation and approval may be used only for projects where the FHWA Division Administrator, in accordance with this evaluation, ensures that the proposed action includes all possible planning to minimize harm. Measures to minimize harm will consist of those measures necessary to preserve the historic integrity of the site and agreed to, in accordance with 36 CFR Part 800 by the FHWA, the SHPO, and as appropriate, the ACHP.

Coordination

The use of this programmatic evaluation and approval is conditioned upon the satisfactory completion of coordination with the SHPO, the ACHP, and interested persons as called for in 36 CFR Part 800. Coordination with interested persons, such as the local government, the property owner, a local historical society, or an indian tribe, can facilitate in the evaluation of the historic resource values and mitigation proposals and is therefore highly encouraged.

For historic sites encumbered with Federal .interests, coordination is required with the Federal agencies responsible for the encumbrances.

Before applying this programmatic evaluation to projects requiring an individual bridge permit, the Division Administrator shall coordinate with the U.S. Coast Guard District Commander.

Approval Procedure:

This programmatic Section 4(f) approval applies only after the FHWA Division Administrator has:

1. Determined that the project meets the applicability criteria set forth above;

2. Determined that all of the alternatives set forth in the Findings section have been fully evaluated;

3. Determined that the findings in this document (which conclude that there are no feasible and prudent alternatives to the use of land from or non-historic improvements on the historic site) are clearly applicable to the project;

4. Determined that the project complies with the Measures to Minimize Harm section of this document;

5. Determined that the coordination called for in this programmatic evaluation has been successfully completed;

6. Assured that the measures to minimize harm will be incorporated in the project; and

7. Documented the project file clearly identifying the basis for the above determinations and assurances.

Issued on: 12/23/86

Approved:
/Original Signed By/
Ali Sevin, Director
Office of Environmental Policy
Federal Highway Administration